

## EXHIBIT A

### CITY OF DETROIT BROWNFIELD REDEVELOPMENT AUTHORITY

### BROWNFIELD PLAN FOR THE @WATER LOFTS SOUTH REDEVELOPMENT PROJECT

Prepared by:

@water Lofts, LLC  
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Detroit, Michigan 48201  
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Last Revision Date: 9/12/06

**CITY OF DETROIT  
BROWNFIELD REDEVELOPMENT AUTHORITY  
BROWNFIELD PLAN**

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## **I. INTRODUCTION**

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In order to promote the revitalization of environmentally distressed and blighted areas within the boundaries of the City of Detroit, Michigan (the “City”), the City has established the City of Detroit Brownfield Redevelopment Authority (the “Authority”) pursuant to Michigan Public Act 381 of 1996, as amended (“Act 381”).

The primary purpose of this Brownfield Plan (“Plan”) is to promote the redevelopment of and private investment in certain “brownfield” properties within the City. Inclusion of property within this Plan will facilitate financing of environmental response and other eligible activities at eligible properties, and will also provide tax incentives to eligible taxpayers willing to invest in revitalization of eligible sites, commonly referred to as “brownfields.” By facilitating redevelopment of brownfield properties, this Plan is intended to promote economic growth for the benefit of the residents of the City and all taxing units located within and benefited by the Authority.

The identification or designation of a developer or proposed use for the eligible property that is the subject of this Plan shall not be integral to the effectiveness or validity of this Plan. This Plan is intended to apply to the eligible property identified in this Plan and, if tax increment revenues are proposed to be captured from that eligible property, to identify and authorize the eligible activities to be funded by such tax increment revenues. Any change in the proposed developer or proposed use of the eligible property shall not necessitate an amendment to this Plan, affect the application of this Plan to the eligible property, or impair the rights available to the Authority under this Plan.

This Plan is intended to be a living document, which may be modified or amended in accordance with the requirements of Act 381, as necessary to achieve the purposes of Act 381. The applicable sections of Act 381 are noted throughout the Plan for reference purposes.

This Brownfield Plan contains information required by Section 13(1) of Act 381.

## **II. GENERAL PROVISIONS**

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### **A. Description of the Eligible Property (Section 13 (1)(h)) and the Project**

The property comprising the eligible property consists of one parcel. 1470 E. Atwater Street is a facility. Currently no structures exist on the eligible property. Most recently, two buildings that were demolished in place were located on the eligible property. It is likely that foundations and subsurface construction debris from these buildings and other buildings historically located on the eligible property may still be present.

@water Lofts, LLC is the project developer (“Developer”). @water Lofts South (“the project”) will be the first of a three-phased development and will be recognized as one of Detroit’s premier neighborhoods, providing street-level retail space, and mid-rise

residential units. The site offers easy access to the state’s first urban park. Residents will enjoy an ample garden court with unrestricted views of the Detroit River.

Attachment A includes a site map of the parcel. The property is located in Detroit’s East Riverfront District, bounded by Atwater Street to the north, vacated Riopelle Street followed by 1500 E. Atwater Street to the east, the Detroit River to the south and 1420 E. Atwater Street to the west.

The eligible property will include all tangible personal property to be located on the real property. Parcel information is outlined below. Attachment B provides the individual legal description for the eligible property.

| Address                | Tax ID                           | Owner   |
|------------------------|----------------------------------|---|
| 1470 E. Atwater Street | Part of Ward 07 / Item<br>000005 | City of Detroit Economic<br>Development Corporation |

The parcels and all tangible personal property located thereon will comprise the eligible property and is referred to herein as the “Property.”

Attachment C provides a description of the project to be completed at the Property (the “Project”) and Attachment D includes letters of support of the Project.

**B. Basis of Eligibility (Section 13 (1)(h) and Section 2 (m))**

The Property is considered “eligible property” as defined by Act 381, Section 2 because (a) the Property was previously utilized for a industrial purpose; (b) it is located within the City of Detroit, a qualified local governmental unit under Act 381; and (c) the Property is determined to be a facility as defined by Act 381.

Enviro Matrix, Inc. (EM) completed a Baseline Environmental Assessment (BEA) on June 30, 2005 for the City of Detroit at the eligible property. EM’s investigation identified the eligible property as a “facility” as defined by Part 201 of NREPA, Michigan PA 451 of 1994, as amended.

The results of the BEA indicate that contaminated soil and groundwater have been identified at the eligible property. Specifically, trimethylbenzene at a maximum concentration of 1,900 µg/Kg was detected in soil samples collected at SB-6 at concentrations exceeding the generic residential cleanup criteria (GRCC) groundwater to surface water interface protection (GSI) Criterion of 570 µg/Kg. In addition, mercury at a maximum concentration of 6.2 µg/L was detected in groundwater samples collected at SB-6 at concentrations exceeding the GRCC GSI Criterion of 0.0013 µg/L and the GRCC drinking water protection (DWP) Criterion of 2.0 µg/L. Lead at a maximum concentration of 1,100 µg/L was also detected in groundwater samples collected at SB-6 at concentrations exceeding the DWP Criterion of 0.2 µg/L.

**C. Summary of Eligible Activities and Description of Costs (Section 13 (1)(a),(b))**

The “eligible activities” that are intended to be carried out at the Property are considered “eligible activities” as defined by Sec 2 of Act 381, because they include Baseline Environmental Assessment (BEA), due care, additional response activities, infrastructure improvements, site preparation, legal/entitlement/appraisal, and engineering, design and testing. A summary of the eligible activities and the estimated cost of each eligible activity intended to be paid for with Tax Increment Revenues from the Property are shown in the table below:

**ESTIMATED COST OF ELIGIBLE ACTIVITIES**

| <b>Description of Eligible Activities</b>            | <b>Estimated Cost</b> |
|--|-----------------------|
| 1. MEGA Work Plan Preparation                        | \$ 5,000              |
| 2. State Work Plan Review Fee                        | \$ 2,500              |
| 3. Baseline Environmental Site Assessment Activities | \$ 87,600             |
| 4. Due Care and Additional Response Activities       | \$ 1,361,449          |
| 5. Site Preparation/removal of fill material         | \$ 535,392            |
| 6. Legal/Entitlement/Appraisal                       | \$ 56,989             |
| 7. Engineering, Design, and Testing                  | \$ 170,967            |
| 8. Interest  | \$ 602,176            |
| 9. Contingency                                       | \$ 333,066            |
| <b>Subtotal Site Eligible Activities</b>             | <b>\$ 3,155,679</b>   |
| 10. Authority Administrative Costs                   | \$ 328,548            |
| 11. Local Site Remediation Revolving Fund            | \$ 3,079,862          |
| <b>Total Estimated Cost to be Funded Through TIF</b> | <b>\$ 6,564,088</b>   |

It is currently anticipated that construction will begin in the spring of 2007 and eligible activities will be completed within 2 years. Unless otherwise agreed to in writing by the Authority, all eligible activities will be completed within three (3) years after execution of the Reimbursement Agreement (as that term is defined below), however, any long-term monitoring or operation or maintenance activities or obligations that may be required will be performed in compliance with the terms of this Plan and any documents prepared pursuant to this Plan.

The Developer desires to be reimbursed for the costs of eligible activities. Tax increment revenue generated by the Property will be captured by the Authority and used to reimburse the cost of the eligible activities completed on the Property after approval of this Plan pursuant to the terms of a Reimbursement Agreement with the Authority (the “Reimbursement Agreement”). A Neighborhood Enterprise Zone is also being sought.

The costs listed in the table above are estimated costs and may increase or decrease depending on the nature and extent of environmental contamination and other unknown conditions encountered on the Property. The actual cost of those eligible activities encompassed by this Plan that will qualify for reimbursement from tax increment revenues of the Authority from the Property shall be governed by the terms of the

Reimbursement Agreement. No costs of eligible activities will be qualified for reimbursement except to the extent permitted in accordance with the terms and conditions of the Reimbursement Agreement. The Reimbursement Agreement and this Plan will dictate the total cost of eligible activities subject to payment, provided that the total cost of eligible activities subject to payment or reimbursement under the Reimbursement Agreement shall not exceed the estimated costs set forth above by more than 15% without requiring an amendment to this Plan. As long as the total costs, adjusted by the 15% factor, are not exceeded, line item costs of eligible activities may be adjusted after the date this Plan is approved by City Council, to the extent the adjustments do not violate the terms of the approved MDEQ or MEGA work plan.

**D. Estimate of Captured Taxable Value and Tax Increment Revenues (Section 13(1)(c)); Impact of Tax Increment Financing on Taxing Jurisdictions (Section 13(1)(g))**

This Plan anticipates the capture of tax increment revenues to reimburse the Developer for the costs of eligible activities under this Plan in accordance with the Reimbursement Agreement. A table of estimated tax increment revenues to be captured is attached to this Plan as Attachment E.

Tax increments are projected to be captured and applied to (i) reimbursement of eligible activity costs and payment of Authority administrative costs, and (ii) make deposits into the Authority's Local Site Remediation Revolving Fund, as follows:

|  | <b>Reimbursements and<br/><u>Admin. Costs</u></b> | <b><u>Revolving Fund</u></b> |
|--|---|------------------------------|
| School Operating Tax   | \$ 68,416   | \$57,297                     |
| State Education Tax  | \$ 215,149  | \$242,816                    |
| County (combined)  | \$ 1,170,056                                      | \$ 1,032,240                 |
| HCMA   | \$ 16,945   | \$ 16,064                    |
| City of Detroit  | \$ 1,395,568                                      | \$ 1,355,386                 |
| RESA   | \$ 322,146  | \$ 257,520                   |
| WCCC   | \$ 295,947  | \$ 71,718                    |
| Garbage (no reliable millage was available so it was not included as a part of the TIFF capture) |   |                              |

In addition, the following taxes are projected to be generated but not to be captured during the life of the Plan:

|                 |              |
|-----------------|--------------|
| City Debt       | \$ 1,640,772 |
| School Debt     | \$ 1,019,381 |
| School Judgment | \$ 62,731    |
| Total           | \$ 2,722,884 |

**E. Plan of Financing (Section 13(1)(d)); ,Maximum Amount of Indebtedness (Section 13(1)(e))**

The eligible activities are to be financed solely by the Developer. The Authority will reimburse the Developer for the cost of approved eligible activities plus interest, but only from tax increment revenues generated from the Property. No advances have been or shall be made by the City or the Authority for the costs of eligible activities under this Plan.

All reimbursements authorized under this Plan shall be governed by the Reimbursement Agreement. The inclusion of eligible activities plus interest and estimates of costs to be reimbursed in this Plan are intended to authorize the Authority to fund such reimbursements and does not obligate the Authority or the City to fund any reimbursement or to enter into the Reimbursement Agreement providing for the reimbursement of any costs for which tax increment revenues may be captured under this Plan, or which are permitted to be reimbursed under this Plan. The amount and source of any tax increment revenues that will be used for purposes authorized by this Plan, and the terms and conditions for such use and upon any reimbursement of the expenses permitted by the Plan, will be provided solely under the Reimbursement Agreement contemplated by this Plan.

The Authority shall not incur any note or bonded indebtedness to finance the purposes of this Plan. Reimbursements under the Reimbursement Agreement shall not exceed the cost of Eligible Activities permitted under this Plan and the Reimbursement Agreement.

**F. Single Business Tax Credit**

The Property is included in this Plan to enable “qualified taxpayers” as defined by Michigan Public Act 382 of 1996, as amended, Michigan Public Act 143 of 2000, as amended, or Michigan Public Act 726 of 2002, as amended (the “SBT Credit Acts”) to avail themselves of eligibility for a credit against their Michigan single business tax liability for “eligible investments”, as defined by Section 38g of Michigan Public Act 228 of 1975, as amended (“Act 228”), incurred on the Property after the adoption of this Plan. Total project investment is anticipated at approximately \$119.5 million, with estimated eligible investment exceeding \$97 million.

By approval of this Plan, the Authority and the City neither intend to make nor have made representations to a developer or any other person of the availability, amount or value of any credit under the SBT Credit Acts or that adoption of this Plan will qualify or entitle a developer or any other person to apply for or receive pre-approval or approval of any credit under the SBT Credit Acts for the Property. The Authority and the City also assume no obligation to take any action or to modify or amend this Plan to facilitate or to allow any person to receive pre-approval or approval of any credit under the SBT Credit Acts for the Property.



**G. Duration of Plan (Section 13(1)(e))**

Unless otherwise agreed to in writing by the Authority, in no event shall the duration of this Plan extend beyond:

a. One hundred and eighty (180) days after the date this Plan is approved by City Council unless the Developer receives a related work plan and small business tax pre-approval letter from the Michigan Economic Growth Authority on or before such date;

b. One hundred and eighty (180) days after the date this Plan is approved by City Council unless the Developer and the Authority have finalized and executed the Reimbursement Agreement on or before such date; or

c. Three years after the date the Developer and the Authority have finalized and executed the Reimbursement Agreement.

In no event, however, shall this Plan extend beyond the maximum term allowed by Section 13(1)(f) of Act 381 for the duration of this Plan.

**H. Effective Date of Inclusion in Brownfield Plan**

The Property will become a part of this Plan on the date this Plan is approved by the City Council.

**I. Displacement/Relocation of Individuals on Eligible Property (Section 13(1)(i-l))**

There are no persons or businesses residing on the eligible property and no occupied residences will be acquired or cleared, therefore there will be no displacement or relocation of persons or businesses under this Plan.

**J. Local Site Remediation Revolving Fund (“LSRRF”) (Section 8; Section 13(1)(m))**

The Authority has established a Local Site Remediation Revolving Fund (LSRRF). The LSRRF will consist of all tax increment revenues authorized to be captured and deposited in the LSRRF, as specified in Section 13(5) of Act 381, under this Plan and any other plan of the Authority. It may also include funds appropriated or otherwise made available from public or private sources.

The amount of tax increment revenue authorized for capture and deposit in the LSRRF is estimated at \$1,100,129.00.

**K. Owners Obligations, Representations and Warrants**

The Owner and its affiliates shall comply with all applicable laws, ordinances, executive orders, or other regulations imposed by the City or any other properly constituted

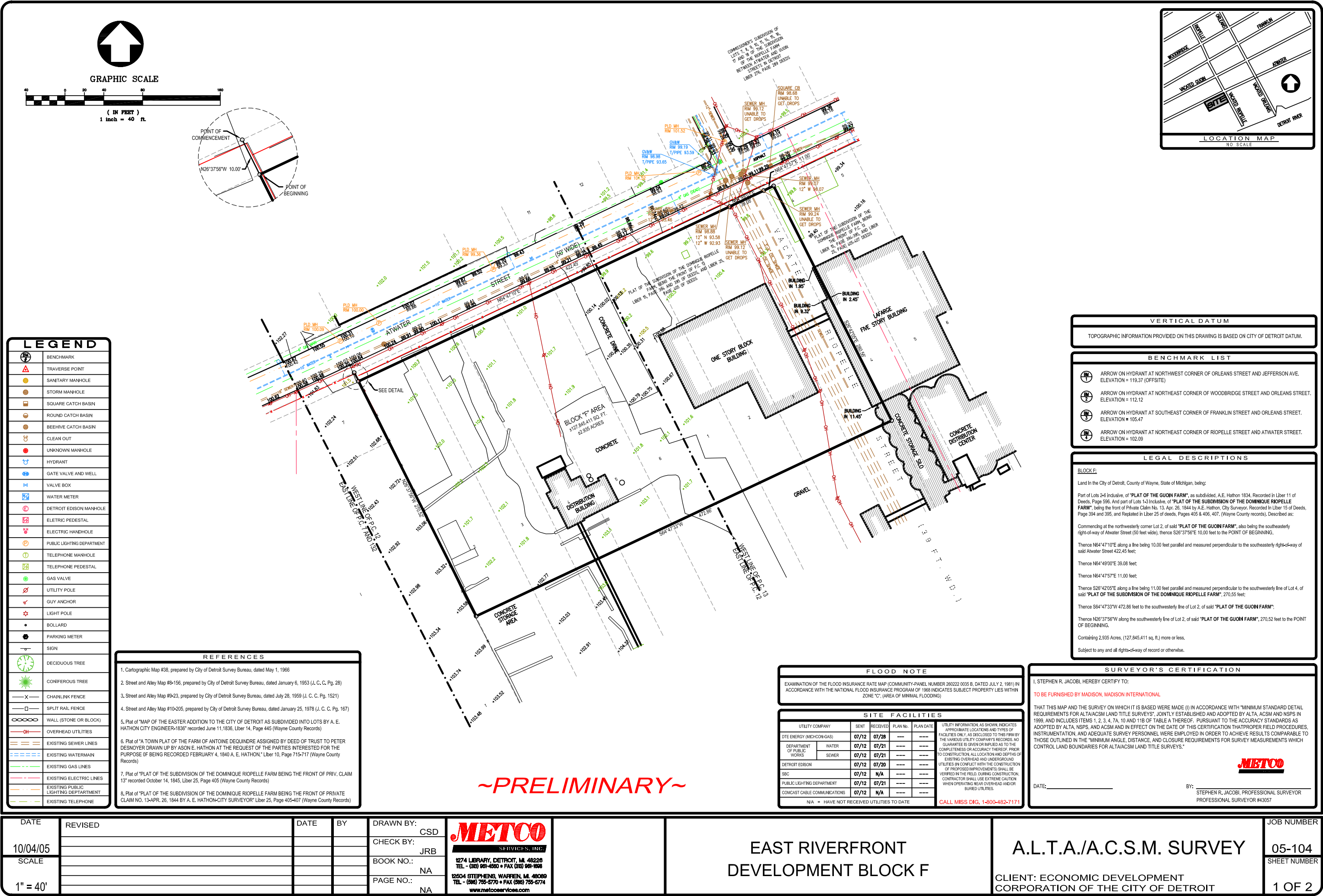
governmental authority with respect to the Property and shall use the Property in accordance with this Plan.

The Developer represents and warrants that a Phase I Environmental Site Assessment (“ESA”), and if appropriate, a Phase II ESA, baseline environmental assessment, and due care plan, pursuant to Part 201 of Michigan’s Natural Resources and Environmental Protection Act (MCL 324.20101 *et seq.*), has (have) been performed on the Property. A copy of the results of the Phase I ESA, and if appropriate, the Phase II ESA, baseline environmental assessment, and due care plan will be placed on file with the Detroit Brownfield Redevelopment Authority.

### **III. ATTACHMENTS**

**ATTACHMENT A**

**Site Map**



## **ATTACHMENT B**

### **Legal Descriptions of Eligible Property to which the Plan Applies**

**Legal Description  
For the Eligible Property**

Land in the City of Detroit, County of Wayne, State of Michigan, being:

Part of Lots 2-6 inclusive, of **“PLAT OF THE GUOIN FARM”**, as subdivided, A.E. Hathon 1834. Recorded in Liber 11 of Deeds, Page 596. And part of Lots 1-3 inclusive, of **“PLAT OF THE SUBDIVISION OF THE DOMINIQUE RIOPELLE FARM”**, being the front of Private Claim No. 13 Apr. 26, 1844 by A.E. Hathon, City Surveyor. Recorded in Liber 15 of Deeds, Page 394 and 395, and Replated in Liber 25 of deeds, Pages 405 & 406, 407. (Wayne County records). Described as:

Commencing at the northwesterly corner Lot 2 of said **“PLAT OF THE GUOIN FARM”**, also being the southeastly right-of-way of Atwater Street (50 feet wide), thence S26°37'56" E 10.00 feet to the POINT OF BEGINNING.

Thence N64°47'10"E along a line being 10.00 feet parallel and measured perpendicular to the southeasterly right-of-way of said Atwater Street 422.45 feet;

Thence N64°49'00"E 39.08 feet;

Thence N64°47'57"E 11.00 feet;

Thence S26°42'05"E along a line being 11.00 feet parallel and measured perpendicular to the southwesterly line of Lot 4, of said **“PLAT OF THE SUBDIVISION OF THE DOMINIQUE RIOPELLE FARM”**, 270.55 feet;

Thence N64°47'33"W 472.86 feet to the southwesterly line of Lot 2, of said **“PLAT OF GUION FARM”**;

Thence N26°37'56"W along the southwesterly line of Lot 2, of said **“PLAT OF GUOIN FARM”**, 270.52 feet to the POINT OF BEGINNING;

Containing 2.935 Acres, (127,845.411 sq. ft.) more or less.

Subject to any and all rights-of-way of record or otherwise.

## **ATTACHMENT C**

### **Project Description**



## **ATTACHMENT D**

### **Supportive Letters**



## MICHIGAN ECONOMIC DEVELOPMENT CORPORATION

September 12, 2006

300 N. WASHINGTON SQ.  
LANSING, MI 48913

CUSTOMER  
CONTACT CENTER  
517 373 9808

WWW.MICHIGAN.ORG

Dwight E. Belyue, Member  
@ Water Lofts LLC  
78 Watson, Suite 100  
Detroit, Michigan 48201

Dear Mr. Belyue:

RE: @ Water Lofts LLC, **Brownfield SBT Application and Work Plan**

On September 8, 2006, the Michigan Economic Development Corporation received Part I of the Brownfield Redevelopment Single Business Tax (SBT) Credit Application (Application) for the above-referenced project. Part I requests a \$9,708,960 Brownfield SBT Credit based on eligible investment in the amount of \$97,089,603 and Local and School Tax capture in the amount of \$1,554,729 for eligible activities at a brownfield site.

Based on the information contained in Part I, the proposed project appears to warrant further review and evaluation. You are invited to submit a complete application, including an updated Part I, Part II, and all required documents, not to exceed a \$9,708,960 credit and a Work Plan not to exceed \$1,554,729. This application must be received by **October 20, 2006** to assure that funding will be available, should it be approved.

Part II of the application is attached. An original and two (2) copies of the completed application should be forwarded directly to the:

Michigan Economic Development Corporation  
Michigan Economic Growth Authority, Brownfield Program  
300 North Washington Square, 3<sup>rd</sup> Floor  
Lansing Michigan 48913

An application fee of \$5,000 shall be submitted with the application prior to consideration of an award by the MEGA. A check payable to the **Michigan Strategic Fund** must accompany Part II of the application if the application is to be considered administratively complete. An Administrative Fee of ½ of 1 percent of the amount of the pre-approval credit amount, up to \$100,000, also applies. One half of the administrative fee must be paid when the pre-approval letter is issued. The balance is due one year after the date of the pre-approval letter.

This letter is not to be construed as a commitment on the part of the State to approve an application. It is intended only to invite submittal of a formal application. You are cautioned not to make any commitments based on this letter.

If you have questions or would like assistance in preparing the attachment(s), please contact Jim Paquet at (517) 335-3441.

Sincerely,

Peter C. Anastor, Manager  
Brownfield Redevelopment

cc: Jim Paquet, MSHDA  
Mariangela Pledl, DEGC  
Corey Leon, AKT Peerless

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STATE OF MICHIGAN

JENNIFER M. GRANHOLM  
GOVERNORDEPARTMENT OF NATURAL RESOURCES  
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DIRECTOR

August 4, 2006

Mr. Athanasios Papapanos, Authorized Agent  
Detroit Brownfield Redevelopment Authority  
Guardian Building, 22<sup>nd</sup> Floor  
Detroit, Michigan 48226

SUBJECT: Department of Natural Resources support for the @water Lofts South Development

Dear Mr. Papapanos:

The Parks and Recreation Division of the Department of Natural Resources (DNR) supports the @Water Lofts project being developed by @Water Lofts, LLC in cooperation with the Detroit Wayne County Port Authority. This project will be built with an investment of over \$42 million in tax incremented revenues, and millions of dollars in development. This project is part of the revitalization of a region of Detroit that was formerly dominated by industrial use. The @Water Lofts project will encourage new residents to move into downtown Detroit, and new businesses to thrive along the Detroit riverfront.

The @Water Lofts' five-story townhome and retail development will overlook a portion of the Tri-Centennial State Park and Harbor (state park). The mixed use development will be enhanced by the state park with direct access to park amenities, riverfront green space, views of the Detroit River, and a state harbor. Residents, retail users, and other visitors to the state park and harbor will be able to use, enjoy and learn about features now being designed, including a stormwater treatment demonstration wetland, fishing piers, visitor's center, and other major features.

The @Water Lofts will be located adjacent to the Detroit RiverWalk, a five-mile linear walkway and non-motorized transportation route. The RiverWalk, and another trail, the Dequindre Cut, will be constructed over the next several years. These trails will connect neighborhoods with parks and other destinations within the heart of the city of Detroit.

Sincerely,

Vicki Anthes  
Planning Section Chief  
Parks and Recreation Division  
517-335-7890

## NATURAL RESOURCES COMMISSION

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## DETROIT RIVERFRONT CONSERVANCY

August 8, 2006

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Kathleen WendlerFaye Alexander Nelson  
President & CEOMr. Athanasios Papapanos  
Detroit Brownfield Redevelopment Authority  
500 Griswold Street  
Guardian Building, Suite 2200  
Detroit, MI 48226

Dear Mr. Papapanos:

The @Water Lofts LLC has asked the Detroit RiverFront Conservancy (Conservancy) to provide comment on the proposed @Water Loft development project located along Atwater between Rivard and Riopelle.

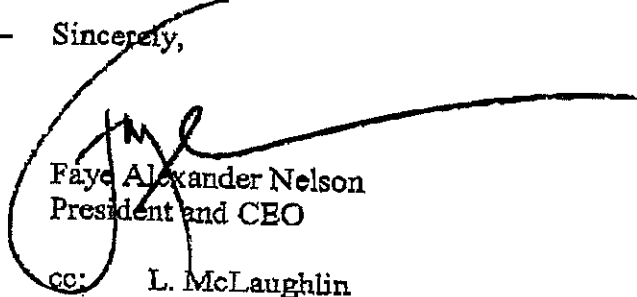
The Conservancy is responsible for the development, maintenance, operations and programming of the RiverWalk which is currently under construction along the east riverfront. Additionally, the Conservancy is in collaboration with the Michigan Department of Natural Resources in the development of the Tri-Centennial State Park and Harbor which is immediately adjacent to one of the phases of the proposed @Water development.

The purpose for the development of the RiverWalk is to provide opportunities for accessibility and connectivity for all people to the riverfront. Linked to these principles are the rejuvenation and development of the Detroit International Riverfront, creating expanded socio-economic opportunities and benefits for the City of Detroit, the southeast Michigan region and the state of Michigan.

The proposed development by @Water Lofts LLC is supported by the Detroit RiverFront Conservancy as consistent with the vision, mission and planning for the east riverfront area.

We are pleased to respond to any inquiries you may have.

Sincerely,

  
Faye Alexander Nelson  
President and CEOcc: L. McLaughlin  
L. Marszalek  
G. Jackson

## **ATTACHMENT E**

### **TIF Tables**

|  |         |        | 2008         | 2009         | 2010           | 2011           | 2012           | 2013           | 2014           | 2015           | 2016           | 2017           | 2018           | Totals       |
|--|---------|--------|--------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|
| Current Taxable Value                                    |         |        | \$ 1,279,663 | \$ 1,279,663 | \$ 1,279,663   | \$ 1,279,663   | \$ 1,279,663   | \$ 1,279,663   | \$ 1,279,663   | \$ 1,279,663   | \$ 1,279,663   | \$ 1,279,663   | \$ 1,279,663   |              |
| Weighted Current Taxable Value (Residential)             |         |        | \$ 0.9857    |              |                |                |                |                |                |                |                |                |                |              |
| Weighted Current Taxable Value (Commercial)              |         |        | \$ 0.0143    |              |                |                |                |                |                |                |                |                |                |              |
| Residential True Market Value (increases by 1% per year) |         |        |              |              | \$ 125,341,711 | \$ 126,595,128 | \$ 127,861,079 | \$ 129,139,690 | \$ 130,431,087 | \$ 131,735,398 | \$ 133,052,752 | \$ 134,383,279 | \$ 135,727,112 |              |
| Residential Taxable Value (Discounted 5%)                |         |        |              |              | \$ 59,537,313  | \$ 60,132,686  | \$ 60,734,013  | \$ 61,341,353  | \$ 61,954,766  | \$ 62,574,314  | \$ 63,200,057  | \$ 63,832,058  | \$ 64,470,378  |              |
| Residential Tax Increment Value                          |         |        |              |              | \$ 58,275,981  | \$ 58,871,354  | \$ 59,472,681  | \$ 60,080,021  | \$ 60,693,434  | \$ 61,312,982  | \$ 61,938,725  | \$ 62,570,726  | \$ 63,209,046  |              |
| Commercial True Market Value (increases by 1% per year)  |         |        |              |              | \$ 1,795,500   | \$ 1,813,455   | \$ 1,831,590   | \$ 1,849,905   | \$ 1,868,404   | \$ 1,887,089   | \$ 1,905,959   | \$ 1,925,019   | \$ 1,944,269   |              |
| Commercial Taxable Value (Discounted 15%)                |         |        |              |              | \$ 763,088     | \$ 770,718     | \$ 778,426     | \$ 786,210     | \$ 794,072     | \$ 802,013     | \$ 810,033     | \$ 818,133     | \$ 826,314     |              |
| Commercial Tax Increment Value                           |         |        |              |              | \$ 744,757     | \$ 752,387     | \$ 760,095     | \$ 767,879     | \$ 775,741     | \$ 783,682     | \$ 791,702     | \$ 799,802     | \$ 807,983     |              |
|  |         |        |              |              |                |                |                |                |                |                |                |                |                |              |
| Residential  |         |        |              |              |                |                |                |                |                |                |                |                |                |              |
| School Taxes - Millage                                   |         | NEZ    |              |              |                |                |                |                |                |                |                |                |                |              |
| State Educ Tax   | 6.0000  | 1.5471 | \$ -         | \$ -         | \$ 90,160      | \$ 91,081      | \$ 92,012      | \$ 92,951      | \$ 93,900      | \$ 94,859      | \$ 95,827      | \$ 96,805      | \$ 97,792      | \$ 845,388   |
| Local Taxes - Millage                                    |         |        |              |              |                |                |                |                |                |                |                |                |                | \$ -         |
| Community College  | 2.4862  | 0.6411 | \$ -         | \$ -         | \$ 37,359      | \$ 37,741      | \$ 38,127      | \$ 38,516      | \$ 38,909      | \$ 39,306      | \$ 39,708      | \$ 40,113      | \$ 40,522      | \$ 350,301   |
| City General   | 19.9620 | 5.1473 | \$ -         | \$ -         | \$ 299,963     | \$ 303,028     | \$ 306,123     | \$ 309,249     | \$ 312,407     | \$ 315,596     | \$ 318,816     | \$ 322,070     | \$ 325,355     | \$ 2,812,606 |
| Wayne County   | 6.6380  | 1.7116 | \$ -         | \$ -         | \$ 99,747      | \$ 100,766     | \$ 101,796     | \$ 102,835     | \$ 103,885     | \$ 104,946     | \$ 106,017     | \$ 107,098     | \$ 108,191     | \$ 935,281   |
| Library  | 3.6331  | 0.9368 | \$ -         | \$ -         | \$ 54,594      | \$ 55,151      | \$ 55,715      | \$ 56,284      | \$ 56,858      | \$ 57,439      | \$ 58,025      | \$ 58,617      | \$ 59,215      | \$ 511,897   |
| Jail   | 0.9381  | 0.2419 | \$ -         | \$ -         | \$ 14,097      | \$ 14,241      | \$ 14,386      | \$ 14,533      | \$ 14,681      | \$ 14,831      | \$ 14,983      | \$ 15,135      | \$ 15,290      | \$ 127,176   |
| Wayne County Parks                                       | 0.2459  | 0.0634 | \$ -         | \$ -         | \$ 3,695       | \$ 3,733       | \$ 3,771       | \$ 3,809       | \$ 3,848       | \$ 3,888       | \$ 3,927       | \$ 3,967       | \$ 4,008       | \$ 34,647    |
| HCMA   | 0.2161  | 0.0557 | \$ -         | \$ -         | \$ 3,247       | \$ 3,280       | \$ 3,314       | \$ 3,348       | \$ 3,382       | \$ 3,417       | \$ 3,451       | \$ 3,487       | \$ 3,522       | \$ 30,448    |
| RESA   | 3.4643  | 0.8933 | \$ -         | \$ -         | \$ 52,057      | \$ 52,589      | \$ 53,126      | \$ 53,669      | \$ 54,217      | \$ 54,770      | \$ 55,329      | \$ 55,893      | \$ 56,464      | \$ 488,113   |
| Taxes Generated but Not Captured by DBRA                 |         |        |              |              |                |                |                |                |                |                |                |                |                | \$ -         |
| School Debt  | 13.0000 | 3.3521 | \$ -         | \$ -         | \$ 195,347     | \$ 197,343     | \$ 199,359     | \$ 201,395     | \$ 203,451     | \$ 205,528     | \$ 207,625     | \$ 209,744     | \$ 211,883     | \$ 1,831,674 |
| Bond Debt  | 7.9245  | 2.0434 | \$ -         | \$ -         | \$ 119,079     | \$ 120,296     | \$ 121,524     | \$ 122,765     | \$ 124,019     | \$ 125,285     | \$ 126,564     | \$ 127,855     | \$ 129,159     | \$ 1,116,546 |
| School Judgment  | 0.8000  | 0.2063 | \$ -         | \$ -         | \$ 12,021      | \$ 12,144      | \$ 12,268      | \$ 12,394      | \$ 12,520      | \$ 12,648      | \$ 12,777      | \$ 12,907      | \$ 13,039      | \$ 112,718   |
|  | 65.3082 | 16.84  |              |              |                |                |                |                |                |                |                |                |                | \$ -         |
| Commercial   |         |        |              |              |                |                |                |                |                |                |                |                |                |              |
| School Taxes - Millage                                   |         |        |              |              |                |                |                |                |                |                |                |                |                |              |
| School Operating   | 18.0000 |        | \$ -         | \$ -         | \$ 13,406      | \$ 13,543      | \$ 13,682      | \$ 13,822      | \$ 13,963      | \$ 14,106      | \$ 14,251      | \$ 14,396      | \$ 14,544      | \$ 125,712   |
| State Educ Tax   | 6.0000  |        | \$ -         | \$ -         | \$ 4,469       | \$ 4,514       | \$ 4,561       | \$ 4,607       | \$ 4,654       | \$ 4,702       | \$ 4,750       | \$ 4,799       | \$ 4,848       | \$ 41,904    |
| Local Taxes - Millage                                    |         |        |              |              |                |                |                |                |                |                |                |                |                | \$ -         |
| Community College  | 2.4862  |        | \$ -         | \$ -         | \$ 1,852       | \$ 1,871       | \$ 1,890       | \$ 1,909       | \$ 1,929       | \$ 1,948       | \$ 1,968       | \$ 1,988       | \$ 2,009       | \$ 17,364    |
| City General   | 19.9620 |        | \$ -         | \$ -         | \$ 14,867      | \$ 15,019      | \$ 15,173      | \$ 15,328      | \$ 15,485      | \$ 15,644      | \$ 15,804      | \$ 15,966      | \$ 16,129      | \$ 139,415   |
| Wayne County   | 6.6380  |        | \$ -         | \$ -         | \$ 4,944       | \$ 4,994       | \$ 5,046       | \$ 5,097       | \$ 5,149       | \$ 5,202       | \$ 5,255       | \$ 5,309       | \$ 5,363       | \$ 46,360    |
| Library  | 3.6331  |        | \$ -         | \$ -         | \$ 2,706       | \$ 2,733       | \$ 2,761       | \$ 2,790       | \$ 2,818       | \$ 2,847       | \$ 2,876       | \$ 2,906       | \$ 2,935       | \$ 25,374    |
| Jail   | 0.9381  |        | \$ -         | \$ -         | \$ 699         | \$ 706         | \$ 713         | \$ 720         | \$ 728         | \$ 735         | \$ 743         | \$ 750         | \$ 758         | \$ 6,552     |
| Wayne County Parks                                       | 0.2459  |        | \$ -         | \$ -         | \$ 183         | \$ 185         | \$ 187         | \$ 189         | \$ 191         | \$ 193         | \$ 195         | \$ 197         | \$ 199         | \$ 1,717     |
| HCMA   | 0.2161  |        | \$ -         | \$ -         | \$ 161         | \$ 163         | \$ 164         | \$ 166         | \$ 168         | \$ 169         | \$ 171         | \$ 173         | \$ 175         | \$ 1,509     |
| RESA   | 3.4643  |        | \$ -         | \$ -         | \$ 2,580       | \$ 2,606       | \$ 2,633       | \$ 2,660       | \$ 2,687       | \$ 2,715       | \$ 2,743       | \$ 2,771       | \$ 2,799       | \$ 24,195    |
| Taxes Generated but Not Captured by DBRA                 |         |        |              |              |                |                |                |                |                |                |                |                |                | \$ -         |
| School Debt  | 13.0000 |        | \$ -         | \$ -         | \$ 9,682       | \$ 9,781       | \$ 9,881       | \$ 9,982       | \$ 10,085      | \$ 10,188      | \$ 10,292      | \$ 10,397      | \$ 10,504      | \$ 90,792    |
| Bond Debt  | 7.9245  |        | \$ -         | \$ -         | \$ 5,902       | \$ 5,962       | \$ 6,023       | \$ 6,085       | \$ 6,147       | \$ 6,210       | \$ 6,274       | \$ 6,338       | \$ 6,403       | \$ 55,345    |
| School Judgment  | 0.8000  |        | \$ -         | \$ -         | \$ 596         | \$ 602         | \$ 608         | \$ 614         | \$ 621         | \$ 627         | \$ 633         | \$ 640         | \$ 646         | \$ 5,587     |
| Total Yearly Incremental Taxes Captured                  |         |        | \$ -         | \$ -         | \$ 700,785     | \$ 707,945     | \$ 715,178     | \$ 722,483     | \$ 729,861     | \$ 737,312     | \$ 744,838     | \$ 752,440     | \$ 760,117     | \$ 6,570,959 |
| DBRA Annual Fee (5% up to \$75,000)                      |         |        | \$ -         | \$ -         | \$ 35,039      | \$ 35,397      | \$ 35,759      | \$ 36,124      | \$ 36,493      | \$ 36,866      | \$ 37,242      | \$ 37,622      | \$ 38,006      | \$ 328,548   |
| Yearly Taxes Captured for Reimbursement                  |         |        | \$ -         | \$ -         | \$ 665,745     | \$ 672,548     | \$ 679,419     | \$ 686,359     | \$ 693,368     | \$ 700,447     | \$ 707,597     | \$ 714,818     | \$ 722,111     | \$ 6,242,411 |
| Cumulative Taxes Captured for Reimbursement              |         |        | \$ -         | \$ -         | \$ 665,745     | \$ 1,338,294   | \$ 2,017,713   | \$ 2,704,071   | \$ 3,155,679   |                |                |                |                | \$ 3,155,679 |
| Captured Taxes for Revolving Fund                        |         |        | \$ -         | \$ -         | \$ -           | \$ -           | \$ -           | \$ -           | \$ 234,890     | \$ 700,447     | \$ 707,597     | \$ 714,818     | \$ 722,110     | \$ 3,079,862 |
| Cumulative Taxes Captured for Revolving Fund             |         |        | \$ -         | \$ -         | \$ -           | \$ -           | \$ -           | \$ -           | \$ 234,890     | \$ 935,337     | \$ 1,642,934   | \$ 2,357,752   | \$ 3,079,862   | \$ 6,235,541 |
|  |         |        |              |              |                |                |                |                |                |                |                |                |                |              |
| Reimbursed MEGA Expenses                                 |         |        |              |              | \$ 665,745     | \$ 672,548     | \$ 150,979     |                |                |                |                |                |                |              |
| School Taxes   |         |        |              |              | \$ 108,034     | \$ 109,139     | \$ 24,500      |                |                |                |                |                |                |              |
| Local Taxes  |         |        |              |              | \$ 557,711     | \$ 563,409     | \$ 126,478     |                |                |                |                |                |                |              |
| Unreimbursed MEGA Expenses                               |         |        | \$ 1,489,272 | \$ 823,527   | \$ 150,979     | \$ -           |                |                |                |                |                |                |                |              |
|  |         |        |              |              |                |                |                |                |                |                |                |                |                |              |
| Reimbursed MDEQ Expenses                                 |         |        |              |              |                |                | \$ 521,570     | \$ 686,359     | \$ 458,478     |                |                |                |                |              |
| School Taxes   |         |        |              |              |                |                | \$ 84,639      | \$ 111,380     | \$ 74,401      |                |                |                |                |              |
| Local Taxes  |         |        |              |              |                |                | \$ 436,931     | \$ 574,978     | \$ 384,077     |                |                |                |                |              |
| Unreimbursed MDEQ Expenses                               |         |        | \$ 1,666,406 |              |                |                | \$ 1,144,836   | \$ 458,478     | \$ -           |                |                |                |                |              |

| Description of Eligible Activities                         | Estimated Cost |
|--|----------------|
| 1. MDEQ and MEGA Work Plan Preparation                     | \$ 5,000       |
| 2. State Work Plan Review Fee                              | \$ 2,500       |
| 3. Baseline Environmental Site Assessment Activities       | \$ 87,600      |
| 4. Due Care and Additional Response Activities             | \$ 1,361,449   |
| 5. Site Preparation/removal of fill material and basements | \$ 535,932     |
| 5. Legal/Entitlement/Appraisal                             | \$ 56,989      |
| 6. Engineering, Design, and Testing                        | \$ 170,967     |
| 7. Interest  | \$ 602,176     |
| 8. Contingency   | \$ 333,066     |
| Eligible Activities to be funded by TIF                    | \$ 3,155,679   |
| 9. Authority Administrative Costs                          | \$ 328,548     |
| Total Estimated Cost to be Funded Through TIF              | \$ 3,484,227   |
| Local Site Remediation Revolving Fund                      | \$ 3,079,862   |

| Tax Increment Financing (Estimated Reimbursements) |              |
|--|--------------|
| Developer Reimbursement                            | \$ 3,155,679 |
| Authority Administrative Costs                     | \$328,548    |
| Local Site Remediation Revolving Fund              | \$3,079,862  |
| TOTAL  | \$6,564,088  |

|  | Reimbursements and |                |
|--|--------------------|----------------|
|  | Admin. Costs       | Revolving Fund |
| School Operating Tax   | \$68,416           | \$57,297       |
| State Education Tax  | \$215,149          | \$242,816      |
| County (combined)  | \$1,185,708        | \$946,403      |
| HCMA   | \$16,945           | \$15,012       |
| City of Detroit  | \$1,395,568        | \$1,556,454    |
| RESA   | \$322,146          | \$190,162      |
| WCCC   | \$295,947          | \$71,718       |
| Garbage (no reliable millage was available so it was not included) |                    |                |
| City Debt  | \$1,640,772        |                |
| School Debt  | \$1,019,381        |                |
| School Judgment  | \$62,731           |                |
| Total  | \$2,722,884        |                |

|                |                   |                  |                   |
|----------------|-------------------|------------------|-------------------|
| Principal:     | \$ 2,553,502.50   |                  |                   |
| Term:          | \$ 5              |                  |                   |
| Interest Rate: | 7.50%             |                  |                   |
| Payment:       | \$ (631,136)      |                  |                   |
| Year           | Principal Portion | Interest Portion | Principal Balance |
| 1              | \$ (439,623)      | \$ (191,513)     | 2,113,879         |
| 2              | \$ (472,595)      | \$ (158,541)     | 1,641,285         |
| 3              | \$ (508,039)      | \$ (123,096)     | 1,133,245         |
| 4              | \$ (546,142)      | \$ (84,993)      | 587,103           |
| 5              | \$ (587,103)      | \$ (44,033)      | 0                 |
| Total Interest |                   | \$ (602,176)     | 0                 |

|      |        |
|------|--------|
| MEGA | 47.19% |
| MDEQ | 52.81% |

Assumptions:  
Increase in taxable value of 1%  
Interest rate at 7.5%  
NEZ for residential development for 12 years



607 Shelby, Suite 900  
Detroit, MI 48226  
Phone - 313-962-9353  
Fax - 313-962-0966

## Water Lofts

## Amortization Schedule(s)

|                           |                  |
|---------------------------|------------------|
| Eligible Activities:      | \$ 12,536,538.00 |
| Capitalized Gap Payments: | \$ 3,600,000.00  |
| Total:                    | \$ 16,136,538.00 |

## Conventional Permanent Loan

|                |                  |
|----------------|------------------|
| Principal:     | \$ 16,136,538.00 |
| Term:          | 30               |
| Interest Rate: | 7.00%            |
| Payment:       | (\$1,300,385.56) |

| Year | Principal Portion | Interest Portion  | Principal Balance |
|------|-------------------|-------------------|-------------------|
| 1    | (\$170,827.90)    | (\$1,129,557.66)  | \$ 15,965,710.10  |
| 2    | (\$182,785.86)    | (\$1,117,599.71)  | \$ 15,782,924.24  |
| 3    | (\$195,580.87)    | (\$1,104,804.70)  | \$ 15,587,343.38  |
| 4    | (\$209,271.53)    | (\$1,091,114.04)  | \$ 15,378,071.85  |
| 5    | (\$223,920.53)    | (\$1,076,465.03)  | \$ 15,154,151.32  |
| 6    | (\$239,594.97)    | (\$1,060,790.59)  | \$ 14,914,556.35  |
| 7    | (\$256,366.62)    | (\$1,044,018.94)  | \$ 14,658,189.73  |
| 8    | (\$274,312.28)    | (\$1,026,073.28)  | \$ 14,383,877.45  |
| 9    | (\$293,514.14)    | (\$1,006,871.42)  | \$ 14,090,363.31  |
| 10   | (\$314,060.13)    | (\$986,325.43)    | \$ 13,776,303.17  |
| 11   | (\$336,044.34)    | (\$964,341.22)    | \$ 13,440,258.83  |
| 12   | (\$359,567.44)    | (\$940,818.12)    | \$ 13,080,691.39  |
| 13   | (\$384,737.17)    | (\$915,648.40)    | \$ 12,695,954.22  |
| 14   | (\$411,668.77)    | (\$888,716.80)    | \$ 12,284,285.46  |
| 15   | (\$440,485.58)    | (\$859,899.98)    | \$ 11,843,799.88  |
| 16   | (\$471,319.57)    | (\$829,065.99)    | \$ 11,372,480.31  |
| 17   | (\$504,311.94)    | (\$796,073.62)    | \$ 10,868,168.36  |
| 18   | (\$539,613.78)    | (\$760,771.79)    | \$ 10,328,554.59  |
| 19   | (\$577,386.74)    | (\$722,998.82)    | \$ 9,751,167.85   |
| 20   | (\$617,803.81)    | (\$682,581.75)    | \$ 9,133,364.03   |
| 21   | (\$661,050.08)    | (\$639,335.48)    | \$ 8,472,313.95   |
| 22   | (\$707,323.59)    | (\$593,061.98)    | \$ 7,764,990.37   |
| 23   | (\$756,836.24)    | (\$543,549.33)    | \$ 7,008,154.13   |
| 24   | (\$809,814.77)    | (\$490,570.79)    | \$ 6,198,339.36   |
| 25   | (\$866,501.81)    | (\$433,883.75)    | \$ 5,331,837.55   |
| 26   | (\$927,156.93)    | (\$373,228.63)    | \$ 4,404,680.62   |
| 27   | (\$992,057.92)    | (\$308,327.64)    | \$ 3,412,622.70   |
| 28   | (\$1,061,501.97)  | (\$238,883.59)    | \$ 2,351,120.72   |
| 29   | (\$1,135,807.11)  | (\$164,578.45)    | \$ 1,215,313.61   |
| 30   | (\$1,215,313.61)  | (\$85,071.95)     | \$ (0.00)         |
|      |                   | (\$19,004,537.28) |                   |

|                |                  |
|----------------|------------------|
| Principal:     | \$ 12,536,538.00 |
| Term:          | 20               |
| Interest Rate: | 7.00%            |
| Payment:       | (\$1,183,360.50) |

| Year | Principal Portion | Interest Portion  | Principal Balance |
|------|-------------------|-------------------|-------------------|
| 1    | (\$305,802.84)    | (\$877,557.66)    | \$ 12,230,735.16  |
| 2    | (\$327,209.04)    | (\$856,151.46)    | \$ 11,903,526.12  |
| 3    | (\$350,113.67)    | (\$833,246.83)    | \$ 11,553,412.45  |
| 4    | (\$374,621.63)    | (\$808,738.87)    | \$ 11,178,790.82  |
| 5    | (\$400,845.14)    | (\$782,515.36)    | \$ 10,777,945.68  |
| 6    | (\$428,904.30)    | (\$754,456.20)    | \$ 10,349,041.37  |
| 7    | (\$458,927.60)    | (\$724,432.90)    | \$ 9,890,113.77   |
| 8    | (\$491,052.54)    | (\$692,307.96)    | \$ 9,399,061.23   |
| 9    | (\$525,426.21)    | (\$657,934.29)    | \$ 8,873,635.02   |
| 10   | (\$562,206.05)    | (\$621,154.45)    | \$ 8,311,428.97   |
| 11   | (\$601,560.47)    | (\$581,800.03)    | \$ 7,709,868.49   |
| 12   | (\$643,669.71)    | (\$539,690.79)    | \$ 7,066,198.79   |
| 13   | (\$688,726.59)    | (\$494,633.92)    | \$ 6,377,472.20   |
| 14   | (\$736,937.45)    | (\$446,423.05)    | \$ 5,640,534.76   |
| 15   | (\$788,523.07)    | (\$394,837.43)    | \$ 4,852,011.69   |
| 16   | (\$843,719.68)    | (\$339,640.82)    | \$ 4,008,292.01   |
| 17   | (\$902,780.06)    | (\$280,580.44)    | \$ 3,105,511.95   |
| 18   | (\$965,974.66)    | (\$217,385.84)    | \$ 2,139,537.28   |
| 19   | (\$1,033,592.89)  | (\$149,767.61)    | \$ 1,105,944.39   |
| 20   | (\$1,105,944.39)  | (\$77,416.11)     | \$ -              |
|      |                   | (\$11,130,672.01) |                   |

|                |                 |
|----------------|-----------------|
| Principal:     | \$ 2,553,502.50 |
| Term:          | 5               |
| Interest Rate: | 7.50%           |
| Payment:       | (\$631,135.72)  |

| Year | Principal Portion | Interest Portion | Principal Balance |
|------|-------------------|------------------|-------------------|
| 1    | (\$439,623.04)    | (\$191,512.69)   | \$ 2,113,879.46   |
| 2    | (\$472,594.77)    | (\$158,540.96)   | \$ 1,641,284.70   |
| 3    | (\$508,039.37)    | (\$123,096.35)   | \$ 1,133,245.33   |
| 4    | (\$546,142.33)    | (\$84,993.40)    | \$ 587,103.00     |
| 5    | (\$587,103.00)    | (\$44,032.72)    | \$ -              |
|      |                   | (\$602,176.12)   |                   |

## Zero Coupon:

|                |                  |
|----------------|------------------|
| Principal:     | \$ 12,536,538.00 |
| Term:          | 20               |
| Interest Rate: | 8.00%            |
| Payment:       | (\$1,276,874.09) |

Total Coupon: \$ 25,537,481.73

| Year | Principal Portion | Interest Portion  | Principal Balance | Cumulative Payment from TIF |
|------|-------------------|-------------------|-------------------|-----------------------------|
| 1    | (\$273,951.05)    | (\$1,002,923.04)  | \$ 12,262,586.95  | \$ 665,745.34               |
| 2    | (\$295,867.13)    | (\$981,006.96)    | \$ 11,966,719.82  | \$ 1,338,293.53             |
| 3    | (\$319,536.50)    | (\$957,337.59)    | \$ 11,647,183.32  | \$ 2,017,712.58             |
| 4    | (\$345,099.42)    | (\$931,774.67)    | \$ 11,302,083.90  | \$ 2,704,071.22             |
| 5    | (\$372,707.37)    | (\$904,166.71)    | \$ 10,929,376.53  | \$ 3,155,679.00             |
| 6    | (\$402,523.96)    | (\$874,350.12)    | \$ 10,526,852.56  | \$ -                        |
| 7    | (\$434,725.88)    | (\$842,148.21)    | \$ 10,092,126.68  | \$ -                        |
| 8    | (\$469,503.95)    | (\$807,370.13)    | \$ 9,622,622.73   | \$ -                        |
| 9    | (\$507,064.27)    | (\$769,809.82)    | \$ 9,115,558.46   | \$ -                        |
| 10   | (\$547,629.41)    | (\$729,244.68)    | \$ 8,567,929.06   | #REF!                       |
| 11   | (\$591,439.76)    | (\$685,434.32)    | \$ 7,976,489.29   | #REF!                       |
| 12   | (\$638,754.94)    | (\$638,119.14)    | \$ 7,337,734.35   | #REF!                       |
| 13   | (\$689,855.34)    | (\$587,018.75)    | \$ 6,647,879.01   | #REF!                       |
| 14   | (\$745,043.77)    | (\$531,830.32)    | \$ 5,902,835.25   | #REF!                       |
| 15   | (\$804,647.27)    | (\$472,226.82)    | \$ 5,098,187.98   | #REF!                       |
| 16   | (\$869,019.05)    | (\$407,855.04)    | \$ 4,229,168.93   | #REF!                       |
| 17   | (\$938,540.57)    | (\$338,333.51)    | \$ 3,290,628.36   |                             |
| 18   | (\$1,013,623.82)  | (\$263,250.27)    | \$ 2,277,004.54   |                             |
| 19   | (\$1,094,713.72)  | (\$182,160.36)    | \$ 1,182,290.82   |                             |
| 20   | (\$1,182,290.82)  | (\$94,583.27)     | \$ 0.00           |                             |
| 21   | #NUM!             | #NUM!             | #NUM!             |                             |
| 22   | #NUM!             | #NUM!             | #NUM!             |                             |
| 23   | #NUM!             | #NUM!             | #NUM!             |                             |
| 24   | #NUM!             | #NUM!             | #NUM!             |                             |
| 25   | #NUM!             | #NUM!             | #NUM!             |                             |
| 26   | #NUM!             | #NUM!             | #NUM!             |                             |
| 27   | #NUM!             | #NUM!             | #NUM!             |                             |
| 28   | #NUM!             | #NUM!             | #NUM!             |                             |
| 29   | #NUM!             | #NUM!             | #NUM!             |                             |
| 30   | #NUM!             | #NUM!             | #NUM!             |                             |
|      |                   | (\$13,000,943.73) |                   |                             |

**ATTACHMENT F**  
**Baseline Environmental Assessment Results**





MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
REMEDIATION AND REDEVELOPMENT DIVISION

FOR DEQ USE ONLY

BEA Disclosure # \_\_\_\_\_

DISCLOSURE OF A BASELINE ENVIRONMENTAL ASSESSMENT  
(FORM EQP4446 (REV. 4/03))

(Under the authority of Part 201, 1994 Act 451, as amended, and the Rules promulgated thereunder)

**DO NOT use this form for requesting a Baseline Environmental Assessment ("BEA") adequacy determination, OR if the property is not a facility, OR if the BEA was complete before the effective date of the BEA rules. Please answer the following questions as completely as possible.**

Name and address of submitter\*  
(individual or legal entity):

City of Detroit  
660 Woodward Ave., Suite 1800  
Detroit, MI 48226

Status relative to the property:

|           | Former                   | Current                             | Prospective              |
|-----------|--------------------------|-------------------------------------|--------------------------|
| Owner*    | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Operator* | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

Address/location of property where  
BEA was conducted:

1470 East Atwater St., Detroit, MI  
1500 East Atwater St., Detroit, MI  
1650 East Atwater St., Detroit, MI

County: Wayne

**Provide the property tax identification number(s) or, if applicable, the ward and item number(s) for the property identified in the BEA. Required pursuant to Rule 907.**

Ward 7, Items 000001-3, 000004, and 000005

Contact person: Mr. Raymond Scott

Telephone #: 313-471-5108

If the address of the person seeking liability protection above is different from the address that should be used to correspond with the contact person, please provide the contact person's address:

Same as Above

Check the appropriate response to each of the following questions.

1. Is it known that the source of contamination at the property is primarily from any of the following?

- A leaking underground storage tank (UST) regulated under Part 213, 1994 PA 451, as amended.
- A licensed landfill or solid waste management facility.
- A licensed hazardous waste treatment, storage, or disposal facility.
- Oil and gas development related activities.

YES NO

☐ ☒

☐ ☒

☐ ☒

☐ ☒

The source of the release that resulted in this property becoming a "facility" will determine which DEQ division will maintain a file regarding this BEA.

2. Based on the Part 201 Rules, this BEA is a:

Category N ☒

Category D ☐

Category S ☐

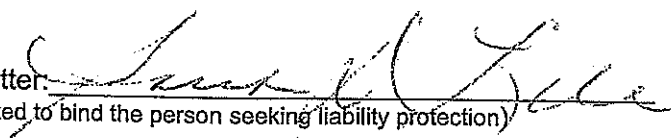
3. Is the property at which the BEA was conducted a "facility"\* as defined by Section 20101? If the answer to this question is NO, do not submit the BEA to the DEQ.

YES NO

☒ ☐

4. Was the BEA conducted\* prior to or within 45 days after the date of purchase\*, occupancy, or foreclosure of the property, whichever is earliest, and completed\* not more than 15 days after the date required by Section 20126(1)(c) or Rule 299.5903(8)?  
If the answer to either portion of this question is no, you are ineligible for an exemption from liability based on the BEA. YES NO  
☒ ☐
5. Is the BEA being disclosed to the DEQ no later than 8 months after the earliest of the date of purchase, occupancy, or foreclosure? All disclosures pursuant to Rule 919(3) must be submitted to the DEQ no later than 8 months after the earliest of the date of purchase, occupancy, or foreclosure. YES NO  
☒ ☐
6. Are any USTs or abandoned or discarded containers identified in the BEA? If yes, this information must be provided on Form EQP4476. YES NO  
☐ ☒
7. Does this BEA rely on an isolation zone or an engineering control that requires an affidavit pursuant to Rule 299.5909(3) or 299.5909(4)? If yes, a completed affidavit, Form EQP4479, must be attached or the BEA will not be considered complete. YES NO  
☐ ☒

With my signature below, I certify that the enclosed BEA and all related materials are complete and accurate to the best of my knowledge and belief. I understand that intentionally submitting false information to the DEQ is a felony and may result in fines up to \$25,000 for each violation.

Signature of Submitter:   
(Person legally authorized to bind the person seeking liability protection)

6/30/05  
Date

Name (Typed or Printed) Sarah D. Lile

Title Director

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## **SUBMITTAL OVERVIEW**

On behalf of the City of Detroit, Enviro Matrix, Inc. (EM) respectfully submits this Baseline Environmental Assessment (BEA). This submittal was prepared as a "Category N" BEA in accordance with the Michigan Department of Environmental Quality (MDEQ) guidance document entitled:

"Instructions for Preparing and Disclosing Baseline Environmental Assessments and Section 7a Compliance Analyses to the Michigan Department of Environmental Quality and for Requesting Optional Determinations, March 11, 1999"

A "Category N" BEA pursuant to the document listed above is defined as follows:

"...a category N BEA is appropriate when there will be no future significant hazardous substance use on the property."

This category was chosen as applicable to the property because the planned use will be recreational with no significant use of materials that may contain hazardous substances. This BEA was prepared for the sole and exclusive use of the City of Detroit and may not be used by another private party for purchase of this parcel of land without the written consent of the City of Detroit. Any private party that relies on this report does so at its own risk.

## **1.0 IDENTIFICATION OF AUTHOR AND DATE OF COMPLETION**

This report and Baseline Environmental Assessment (BEA) was prepared by:

Enviro Matrix, Inc.  
Bryan Alexander, P.E., CHMM

---

The BEA was conducted by: June 17, 2005  
The BEA was completed on: June 30, 2005

## **2.0 INTRODUCTION**

Enviro Matrix, Inc. (EM) was retained by the Economic Development Corporation (EDC), an agent for the City of Detroit (client), to perform a Baseline Environmental Assessment (BEA) for the industrial site (LaFarge Property) located generally between Orleans and Rivard Streets on East Atwater Street, Detroit, MI (see Figure 1 in Attachment A). The subject property for this BEA consists of approximately 9 acres planned for use as a riverfront park. It is comprised of three contiguous parcels, all of which are considered "facilities," per Part 201 of P.A. 451 of 1994, as amended. The

subject property does not currently have a single street address; however, each parcel has its own street address and ward/item number by the City of Detroit, as follows: 1470 (Parcel 105), 1500 (Parcel 109), and 1650 (Parcel 113) E. Atwater Street, Detroit, MI (subject property). The legal description is included in Attachment B.

Parcel IDs are as follows:

1470 E. Atwater St.: Ward ID: 7 Item 000005  
1500 E. Atwater St.: Ward ID: 7 Item 000004  
1650 E. Atwater St.: Ward ID: 7 Item 000001-3

About one half of the subject property (1470 E. Atwater – Parcel 105) for this BEA is currently being utilized by Koenig Fuel & Supply Company, LLC. (Koenig) for concrete blending and loadout operations. Koenig is confined to that one parcel, and their actual operations are limited in scope. They receive and maintain several large stockpiles of aggregate for their concrete mixing operations. They don't use or store chemicals other than dry cement and aggregate. They blend those, add water, and load trucks. The main risk associated with their operations is in regard to the trucks, which could leak crankcase oil or diesel fuel.

The parking areas include concrete, asphalt, crushed limestone, and dirt. Other open areas include large aggregate stockpiles and some grassy lots. Photographs of the Koenig operations as well as the closed LaFarge portions of the property can be found in Attachment C.

There were individual Phase I ESAs completed for the three addresses making up the subject property in 1999 (see Attachment D). The objective of the previous Phase I ESAs conducted by ECT, Inc. was to determine from available information if the entire subject property had been or could have been environmentally impaired and to identify potential Recognized Environmental Concerns (RECs).

To address the RECs identified in the Phase I ESAs, a Phase II ESA was completed in 1999 for each of the three addresses making up the subject property in 1999. The data gathered in the Phase II ESAs indicated that all three addresses were considered "facilities" as defined in Part 201 of the Michigan Natural Resources and Environmental Protection Act (NREPA), PA Act 451 of 1994 as amended.

The City of Detroit took occupancy of the subject property on May 4, 2005. Due to the age of the data in the previous Phase II ESAs, EM was retained by EDC to conduct further investigation, in the form of an updated Phase II ESA to verify that the results of the previous investigations and determine the need to prepare a BEA for the City of Detroit. The work completed to update the Phase II ESA followed guidelines set forth in ASTM Method E 1903-97 and MDEQ guidance as applicable. The scope of the work completed for the updated Phase II investigation did not include buildings and structures

assessment for asbestos, demolition, and associated decontamination of hazardous materials. The data collected from the most recent subsurface investigation (June 2005) confirmed that the three addresses that make up the subject property are still considered "facilities."

The City of Detroit is planning on using the subject property for recreational purposes as a riverfront park. Therefore, this BEA was prepared per the Michigan Department of Environmental Quality's guidance for a "Type N" BEA, as *no* continued or new significant hazardous substance usage is planned for use or storage, within the entire subject property.

### **3.0 PROPERTY DESCRIPTION & INTENDED HAZARDOUS SUBSTANCE USE**

A full property description of each address making up the subject property of this BEA is included in section 2.0 of the individual Phase I ESAs, C. 1999 (see Attachment D) which describes property location, site characteristics and improvements, and site and surrounding land use(s). Additionally, the environmental setting such as climate, topography, geology, hydrogeology, hydrology, surface water, site drainage, wells, underground utilities, wetlands, and historical record review is described in section 3.0 and 4.0 of the Phase I ESAs and section 2.0 of the Phase II ESAs (see Attachment E). The parcel addresses and Ward and Item numbers follow:

| PARCEL ID | Address                   | Ward and Item Number    |
|-----------|---------------------------|-------------------------|
| 105       | 1470 East Atwater Street. | Parcel 7, Item 000005   |
| 109       | 1500 East Atwater Street  | Parcel 7, Item 000004   |
| 113       | 1650 East Atwater Street  | Parcel 7, Item 000001-3 |

A general property description follows.

The subject property of the BEA is comprised of three contiguous parcels with addresses 1470, 1500, and 1650 E. Atwater St. in Detroit, Michigan. The subject property is located on the Detroit River located along East Atwater Street in Detroit, MI between Rivard and Orleans Streets. The site location and topographic features are illustrated on Figures 1 and 2 found in Attachment A.

All three of the addresses making up the subject property have each been identified separately as a "facility."

#### **3.1 Legal Description of Subject Area**

The legal description for the subject property is as follows:

1470 East Atwater Street, Ward 7, Item 000005:

3 THRU 1, SUB OF RIOPELLE FARM L15 P 394-5 CITY RECORDS, WCR 7/2; 6 THRU 2, PLAT OF GUOIN FARM L11 P596 DEEDS, WCR 7/3. 213,963 SQ FT

1500 East Atwater Street, Ward 7, Item 000004:

6 THRU AND VAC RIOPELLE ST ADJ, SUB OF RIOPELLE FARM, L15 P394-5 CITY RECORDS, WCR 7/2. 84,539 SQ FT

1650 East Atwater Street, Ward 7, Items 000001-3:

5-4-3-2, BLK 2, PLAT OF ANTOINE DEQUINDRE FARM, L10 P716-7-8 CITY RECORDS, WCR 7/1. 81,428 SQ FT

### 3.2 Physical Description of Subject Area

The portion of the subject property identified as 1470 E. Atwater – Parcel 105, is currently utilized by Koenig as a cement blending and loadout operation. Table 1 describes details of each address within the subject property:

**Table 1: Current Description of Subject Area for this BEA**

| Parcel (Address)         | Location  | Subject Area Description  |
|--------------------------|---|---|
| 1470 East Atwater Street | West end of the subject property nearest to Rivard St. bounded by vacant lots on the west.              | This area is currently under operation by Koenig Fuel & Supply, LLC as a concrete blending and loadout station. It contains large raw material (aggregate) stockpiles, a small office building and silos and hoppers for blending concrete and loading cement trucks. There are two open gates to this area. This area is paved in some areas with asphalt and concrete, but also includes large areas of unpaved ground. |
| 1500 East Atwater Street | Middle section of the subject property.   | This address contains several buildings and large silos that are now closed but were used as the main operating area for the LaFarge Cement Company. This area is mostly paved with concrete and asphalt but contains some unpaved and grassy areas. There is a fence and locked gate on this area, but it is not secure as it has open connection to the other two addresses on the site.                                |
| 1650 East Atwater Street | East end of the subject property nearest to Orleans Street, bounded by St. Aubin Park on the east side. | This area contains no buildings and is a mixture of vegetated area and open area with aggregate surface. Some truck trailers are stored in this area.   |

Photographs taken during the recently completed fieldwork to update the Phase II ESA may be found in Attachment C.

### 3.3 Past Use of Subject Area

The majority of the subject property for this BEA had previously been used for industrial purposes for over 100 years. All three addresses were most recently owned and operated by LaFarge Cement Company and the firm operating on 1470 E. Atwater – Parcel 105 at the time this report was prepared is Koenig Fuel & Supply Company a concrete blender and transporter. Historic use of the subject property included a cement warehouse;



concrete mixing plant; Public Lighting Commission Substation; several railroad spurs; the Detroit United Railway Power House; coal piles, transfer equipment and operations; two areas designated as "dump;" the Detroit Street Railway Company's Power House; a lime and stone yard; a lumber yard; a lime kiln; several boat slips; a sand and gravel dock; a dry dock; part of the Old Water Works Yard; and the Detroit, Grand Haven, and Milwaukee Railroad Car Repair Shops. In general, the historic use of the subject property has and is industrial. Descriptions of historic use of each address making up the subject property follows:

- **1470 East Atwater Street:** This property is slightly less than five acres in area and historically has been used as a cement warehouse; concrete mixing plant; a Public Lighting Commission Substation; several railroad spurs; the Detroit United Railway Power House; coal piles, transfer equipment and operations; two areas designated as "dump;" the Detroit Street Railway Company's Power House; a lime and stone yard; a lumber yard; a lime kiln; and several boat slips over the last hundred years or more. The most recent use was by LaFarge Cement Company as part of its cement mixing operations with various raw materials stockpiled on this site such as stone, sand, and other road base materials.

No permanent structures currently exist on this property. A significant portion of the riverfront on this property has been filled in from its natural contour. The area filled can be determined in part from Sanborn Fire Insurance Maps, but appears to be at least an additional 150-foot strip of fill in place along the riverfront.

- **1500 East Atwater Street:** This property is slightly less than two acres in area and historically has been used as a cement warehouse; cement storage silos, concrete mixing plants; railroad spurs; the Detroit, Grand Haven, and Milwaukee Railroad Car Shops; a coal yard; and boat slips over the last hundred years or more. The most recent use was by LaFarge Cement Company as part of its cement mixing and storage operations.

Numerous permanent structures currently exist on this property including a large cement plant, cement material storage silos, maintenance garages, and operations offices, all closed and out of operation. A significant portion of the riverfront on this property has been filled in from its natural contour. The area filled can be determined in part from Sanborn Fire Insurance Maps, but appears to be at least an additional 150-foot strip of fill in place along the riverfront.

- **1650 East Atwater Street:** This property is slightly less than two acres in area and historically has been used as part of cement and concrete mixing operations; a sand and gravel dock; a dry dock; part of the Old Water Works Yard; a boat slip; and the Detroit, Grand Haven, and Milwaukee Railroad Car Repair Shops over the last hundred years or more. The most recent use was by LaFarge Cement Company as

part of its cement mixing operations with various raw materials stockpiled on this site such as stone, sand, and other road base materials.

No permanent structures currently exist on this property. A significant portion of the riverfront on this property has been filled in from its natural contour. The area filled can be determined in part from Sanborn Fire Insurance Maps, but appears to be at least an additional 150-foot strip of fill in place along the riverfront.

### **3.4 Uses of Adjacent Properties**

EM evaluated adjacent properties to determine the likelihood of migrating contamination that may affect the subject property. Of the addresses making up the subject property, 1470 E. Atwater is the western-most parcel, 1500 is the middle parcel, and 1650 is the eastern-most parcel. In general, the subject property is surrounded by the Detroit River to the South, the City of Detroit-owned St. Aubin Park to the East, and vacant lots to the north (across Atwater Street) and west.

### **3.5 Intended Future Use**

The subject property's intended use is as a City of Detroit Riverfront Park. The intended use of the facility will not involve significant hazardous substance use, (management, storage, use and treatment of chemicals) beyond typical residential purposes.

Anticipated construction activities include clearing of vegetation, grading, installation of underground utilities and concrete foundations, placement of asphalt and concrete surfaces, landscaping and planting of vegetation, and possibly erection of building structures. The resulting park will be available for recreational use by persons of all ages.

## **4.0 KNOWN CONTAMINATION**

### **4.1 Findings of the Phase I ESA**

In 1999 ECT completed Phase I and II ESAs for the three addresses making up the subject property. The Phase I ESAs were reviewed and based on information supplied by EDC and Koenig (the current site operator for 1470 E. Atwater – Parcel 105); new Phase I ESAs were not conducted. According to EDC and Mike Schwartz (from Koenig); the owner of the property (LaFarge Company), and the operations conducted on the subject property, have not changed since 1999, the date of the Phase I ESAs.

The Phase I ESA reports revealed that historically, much of the entire subject property had been used for industrial purposes. EM finds that the subject property (all three addresses) has been utilized for industrial use for at least 100 years or longer. The industrial use during the late 19<sup>th</sup>, 20<sup>th</sup> and early 21<sup>st</sup> centuries is consistent with the development pattern of the area. The historic uses of the subject property (all three

parcels) included a cement warehouse; concrete mixing plant; Public Lighting Commission Substation; several railroad spurs; the Detroit United Railway Power House; coal piles, transfer equipment and operations; two areas designated as "dump;" the Detroit Street Railway Company's Power House; a lime and stone yard; a lumber yard; a lime kiln; several boat slips a sand and gravel dock; a dry dock; part of the Old Water Works Yard; and the Detroit, Grand Haven, and Milwaukee Railroad Car Repair Shops. These usages caused several recognized environmental concerns (REC's) to be identified on the entire subject property.

Based on the results from the Phase I ESAs conducted for these addresses, potential environmental concerns at the subject property were identified to be as follows:

- Wash pits for cleaning cement hauling trucks;
- Semi-truck usage, parking, and fueling;
- Property is an open LUST site;
- Transformer powerhouse formerly onsite;
- Former railroad tracks;
- Fill material along the waterfront; and
- The long history of industrial use.

The Phase I ESAs were followed up with Phase II ESAs at each site by ECT in 1999. The following section will discuss the results of the previous subsurface investigations within the subject property.

#### **4.2 Summary of the Phase II ESA and subsequent Subsurface Investigations**

A total of 3 soil borings and seven monitoring wells were completed on this combined property as part of the Phase II ESAs completed in 1999. A combination of soil and groundwater samples were collected from these locations as well as from three previously existing wells. All samples were tested for BTEX, PNAs, PCB, and the ten Michigan metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc). All soil and groundwater samples collected during the Phase II ESA contained at least one constituent at concentrations above Part 201 residential criteria. The most prevalent constituents of concern were metals found at levels exceeding GSI criteria. Fewer samples contained PNAs above residential criteria and one soil sample each contained BTEX and PCBs (beneath a transformer pole at 1650 Atwater St.) above residential criteria.

Due to the age of the Phase II data collected (approximately 6 years old) EDC retained EM to further investigate in the form of an Updated Phase II ESA to verify the results of the original Phase II investigation. The updated Phase II ESA was conducted for the benefit of The City of Detroit, a purchaser of the subject property.

Activities conducted during the updated (2005) Phase II ESA included a subsurface investigation via 5 soil borings, using Geoprobe®, to obtain soil and groundwater samples

from the site; and laboratory analyses of those samples for constituents identified in the previous investigations and based on past use of the subject property. Also, a groundwater sample was taken from MW-1, a monitoring well installed during ECT's 1999 subsurface investigation. The results revealed that applicable residential land use cleanup criteria were exceeded at several locations for some of the metals and semi-volatile compounds analyzed.

Specifically, metals, VOCs and SVOCs in the soil were found to exceed the "Protection of Groundwater/GSI" cleanup criteria for this property and at least one constituent at each sample location was found at concentrations exceeding residential GSI protection of surface water criteria. Also all of the groundwater samples collected during this phase of investigation contained metals or SVOCs exceeding GSI criteria. The detection of these compounds exceeding the GSI cleanup criteria qualifies the subject property for this BEA as a "facility" under Part 201 of P.A. 451, of 1994, as amended. Based upon knowledge obtained on the use of the site for industrial purposes in the past, EM concludes that the impact at the subject property results from the previous use of the site.

#### 4.2.1 Field Observations

The original Phase II information is included in Attachment E. The following information summarizes the activities and results obtained during the most recent fieldwork performed on June 6, 2005 to update the Phase II report completed in 1999. Attachment F contains the Updated Phase II ESA Report.

In June 2005, EM installed five (5) soil borings and collected five soil samples and five groundwater samples from the subject property.

Most of the surface of subject property is covered with asphalt/concrete followed by fill material, extending down from surface to 1 to 10 ft below ground surface (BGS). In each soil boring water was encountered between five and 10 feet BGS. Soil type varied from topsoil, sand, and clay, to wood chips, gravel and mixed brick and other fill materials. Fill soil explored during the subsurface investigation at the subject property appeared mixed with other fill materials and debris in various locations. Occasional footings or buried debris was discovered throughout the subject property during this investigation.

Groundwater was observed in all five of the soil borings, and EM collected five groundwater samples from the site; four samples collected from temporary well points placed in the soil borings (at SB-2, 4, 5 and 6) and one from MW-1, a monitoring well installed in a previous investigation and which was located within four feet of the SB-1 soil boring.

#### 4.2.2 Soil Sampling Results

The following table (Table 2) summarizes the analytical data gathered from soil sampling and analysis.

**Table 2: Soil Analytical Results**

| Contaminant            | CAS Number | Maximum Concentration (ppb) at the Site / Sample ID | Residential and Commercial I Generic Cleanup Criteria Exceeded | Criteria Value Exceeded |
|------------------------|------------|---|--|-------------------------|
| Arsenic                | 7440-38-2  | 20,000 / SB-5                                       | Direct Contact   | 7,600                   |
| Mercury                | 7439-97-6  | 400 / SB-5  | Protection of GSI  | 50                      |
| Fluoranthene           | 206-44-0   | 23,000 / SB-5                                       | Protection of GSI  | 5,500                   |
| Naphthalene            | 91-20-3    | 1,500 / SB-5  | Protection of GSI  | 870                     |
| Phenanthrene           | 85-01-8    | 18,000 / SB-5                                       | Protection of GSI  | 5,300                   |
| 1,2,4-Trimethylbenzene | 95-63-6    | 1,900 / SB-6  | Protection of GSI  | 570                     |

#### 4.2.3 Groundwater Sampling Results

The following table (Table 3) summarizes the analytical data gathered from groundwater sampling and analysis.

**Table 3: Groundwater Analytical Results**

| Contaminant  | CAS Number | Maximum Concentration (ppb) at the Site / Sample ID | Residential and Commercial I Generic Cleanup Criteria Exceeded | Criteria Value Exceeded |
|--------------|------------|---|--|-------------------------|
| Mercury      | 7439-97-6  | 6.2 / SB-6  | GSI  | 0.0013                  |
| Lead         | 7439-92-1  | 1100 / SB-6   | GSI  | 14                      |
| Silver       | 7440-22-4  | 0.97 / SB-2   | GSI  | 0.2                     |
| Fluoranthene | 206-44-0   | 2.2 / SB-5  | GSI  | 1.6                     |

#### 4.3 Criteria for Classifying Property as a Facility

A property may be considered a facility if known contaminants are found at concentrations exceeding generic residential cleanup criteria per Part 201 of Act 451, as amended. Soil and groundwater analytical data collected from the site was assembled in a table and compared with the residential and commercial I cleanup standards provided under Part 201, P.A. 451 of 1994, as amended. Analytical data is found on Tables 1 and 2 in the updated Phase II ESA Report prepared by Enviro Matrix, Inc. in 2005 (see Attachment F for the summary of the laboratory analytical data). For each constituent detected in soil and groundwater during this investigation, the most restrictive of Soil Volatilization to Indoor Air Inhalation Criteria (SVIIC), Soil Direct Contact Criteria, and Groundwater-Surface water Interface (GSI) Criteria for Residential and Commercial I land use were selected as applicable cleanup criteria for the subject site. The soil and groundwater cleanup criteria established under the Part 201 of the Natural Resources and Environmental Protection Action, 1994 P.A. 451, as amended, were utilized for determining the status of this property as a facility or not.

A review of the subsurface conditions observed during the investigation at the site suggests that the soil encountered at the site is generally mixed fill overlying moist clay, which starts typically no deeper than 10 ft. BGS. Municipal water supply is the source of potable water in the City of Detroit. These subsurface conditions suggest that the health-based or aesthetic drinking water cleanup criteria are not applicable to the subject site. Since the groundwater encountered at this property is not considered an aquifer, the groundwater related exposure pathways such as drinking water are not applicable as outlined in MDEQ Operational Memorandum No. 11, revised on August 25, 1997.

The volatilization of contaminants from soil to indoor air and to ambient air is a relevant pathway if the presence of volatile contaminants exists at shallow depth. Construction/utility workers and others could be exposed to the impacted soil during any future excavation/construction and use of subsurface structure in the impacted area; however, volatilization to indoor air inhalation (VIAH) cleanup criteria are not applicable to the subject property since none of the volatile compounds exceeds the VAIH criteria for the soil samples collected on June 6, 2005.

In regard to the direct contact criteria, only Arsenic (in soil at location SB-5) was found at levels exceeding those criteria. The possibility of direct contact with arsenic in impacted soil is an exposure pathway relevant to the subject site.

The most frequent criteria exceeded by constituents at the subject property are the GSI criteria for both soil and groundwater. As this property is located along the Detroit River and there is groundwater evident in the site soil borings and monitoring wells, the "groundwater-surface water Interface" (GSI) criteria are considered to be applicable to this property.

Given that direct contact, and GSI are identified as the potential exposure and migration pathways for potential receptors in reference to impacted soil and groundwater at the site the criteria for those pathways must be evaluated when determining if the property is a "facility."

Based on the subsurface and analytical results of this investigation and provision in Part 201 of P.A. 451 of 1994, as amended, this provides the basis for the conclusion that the subject property is a facility.

Additional characterization and delineation of known contaminants is not required for a Type N BEA.

## **5.0 LIKELIHOOD OF OTHER CONTAMINATION**

### **5.1 Contamination from the Subject Property**

The constituents of concern found in soil and groundwater samples on the subject property (metals and PNAs) are widespread and consistent with the long historic use of the property and the types of fill material typically used along urban industrial waterfront properties in Midwest industrial cities (foundry sand, construction and demolition debris, etc.). Considering the historical industrial use of the subject property, the likelihood for other contaminants not identified exists.

The only point sources identified by the subsurface investigations were in the location of a removed UST (SB-6) and under a transformer power pole. Both of those potential point sources have been removed. Therefore contamination in soil and groundwater at the subject site are considered to be relatively stable and not susceptible to future exacerbation.

### **5.2 Contamination from Adjacent and Nearby Properties**

The adjacent and nearby properties are either vacant or recreational in nature. Based upon known research and information, and the length of use of the subject property and surrounding properties, EM does not expect adjacent and nearby properties to exacerbate the levels of the constituents of concern in soil and groundwater in a manner so as to significantly change the property characterization as defined in this report and previous subsurface investigations.

### **5.3 Nearby Sites of Contamination**

A review of the Phase I ESA reports indicated that the property located to the east of the subject property (now St. Aubin Park) has soil impacted with metals and that some of that soil may have been used to construct the berm separating the two sites. In addition, records indicate that the same property to the east may have had from two to five USTs located on the site at one time. The adjacent property to the west is also suspected of formerly having USTs on the site (based on conversations with the current operators and also included in the Phase I ESA for the subject property).

## **6.0 ALTERNATIVE APPROACHES**

NA



## 7.0 BEA CONCLUSIONS

Based upon EM's evaluation and data gathered, the subject property, comprised of the three contiguous parcels: 1470, 1500, and 1650 East Atwater Street is a "facility" per Part 201 of Act 451, of 1994 as amended. The purchaser is eligible for exemption from liability pursuant to Part 201 of Act 451, as Amended.

The subject property is a "facility" due to various metals, VOC, and SVOC compounds having been found in concentrations exceeding the generic residential cleanup criteria set forth in Part 201 of Act 451.

Based on the visual observations and analytical results of soil and groundwater samples collected during this phase of work, EM concludes:

- Soil explored during the subsurface investigation at the subject property appeared to contain materials and staining that was not naturally occurring. The nature of much of the material in the soil was indicative of fill materials often used in filling riverfront properties in Detroit including such things as foundry sand, crushed brick and concrete, wood chips and sawdust, and other types of debris. Occasional buried demolition debris was discovered throughout the subject property during this investigation.
- Metals and SVOC constituents were found in groundwater above GSI criteria. VOCs were not detected in any samples above GSI criteria.
- Metals, SVOC, and VOC constituents were found in soil above both direct contact and protection of GSI criteria.
- Inhalation criteria do not apply as all VOCs were detected below those criteria. Drinking water criteria do not apply as there was no aquifer found on the subject property.
- All soil and groundwater samples contained at least one constituent at concentrations above one of the relevant Part 201 criteria used for determination if a property is a "facility."

Drinking water criteria was not found to apply to this property due to the fact that no usable aquifer exists on the property. Indoor and ambient air inhalation criteria were also found not to apply to this property as all volatile constituents were detected at concentrations below those criteria.

The City of Detroit intends to utilize the property for recreational purposes as a city riverfront park. Future use of the property as a recreational development will not involve significant hazardous substance use (i.e. use, storage, management, treatment) beyond that expected with normal residential usage.

Enviro Matrix  
EM Job # 05-027

The City of Detroit.  
Baseline Environmental Assessment  
LaFarge Property  
June 30, 2005

EM prepared this Type "N" BEA in accordance with Part 201 of Act 451. Future releases of contamination will be distinguishable from existing contamination because hazardous substances at the subject property will not be utilized in the future.

## 7.1 Limitations

This report has been prepared in accordance with standard industry practice for a Baseline Environmental Assessment. The information presented is based in part on the laboratory analytical results of the soil samples collected by EM during the Updated Phase II ESA at the subject site, which was intended only to verify if contamination exists in the prescribed locations, and to determine whether this site is a "facility" or not. Soil conditions between and beyond the sampling locations and the areas not investigated may be different than the conditions indicated by the analytical results at the sampling locations. The information and conclusions presented in this report reflect EM's best judgment and should be implemented only in light of the information available to EM at the time of preparation, and are for use exclusively by the City of Detroit. Any use which a third party (other than the City of Detroit) makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. EM accepts no responsibility for damages, if any, suffered by any third party, because of decisions made or actions based on this report. EM will not distribute or publish this report lacking consent from the City of Detroit, unless required by law or court order. This document provides a reasonable environmental assessment of the conditions at the site as of June 10, 2005 and makes conclusions and recommendations based on these findings.

## 8.0 REFERENCES

The following reports were used as a source of information during the preparation of this BEA:

1. ECT, "1470 East Atwater Street, Phase I Environmental Site Assessment Summary Report and Certification," May 28, 1999
2. ECT, "1500 East Atwater Street, Phase I Environmental Site Assessment Summary Report and Certification," May 28, 1999
3. ECT, "1650 East Atwater Street, Phase I Environmental Site Assessment Summary Report and Certification," May 28, 1999
4. ECT, "Phase II Environmental Site Assessment, Waterfront Reclamation and Casino Project, Detroit, Michigan, 1470 East Atwater Street," August, 1998
5. ECT, "Phase II Environmental Site Assessment, Waterfront Reclamation and Casino Project, Detroit, Michigan, 1500 East Atwater Street," August, 1998
6. ECT, "Phase II Environmental Site Assessment, Waterfront Reclamation and Casino Project, Detroit, Michigan, 1650 East Atwater Street," August, 1998

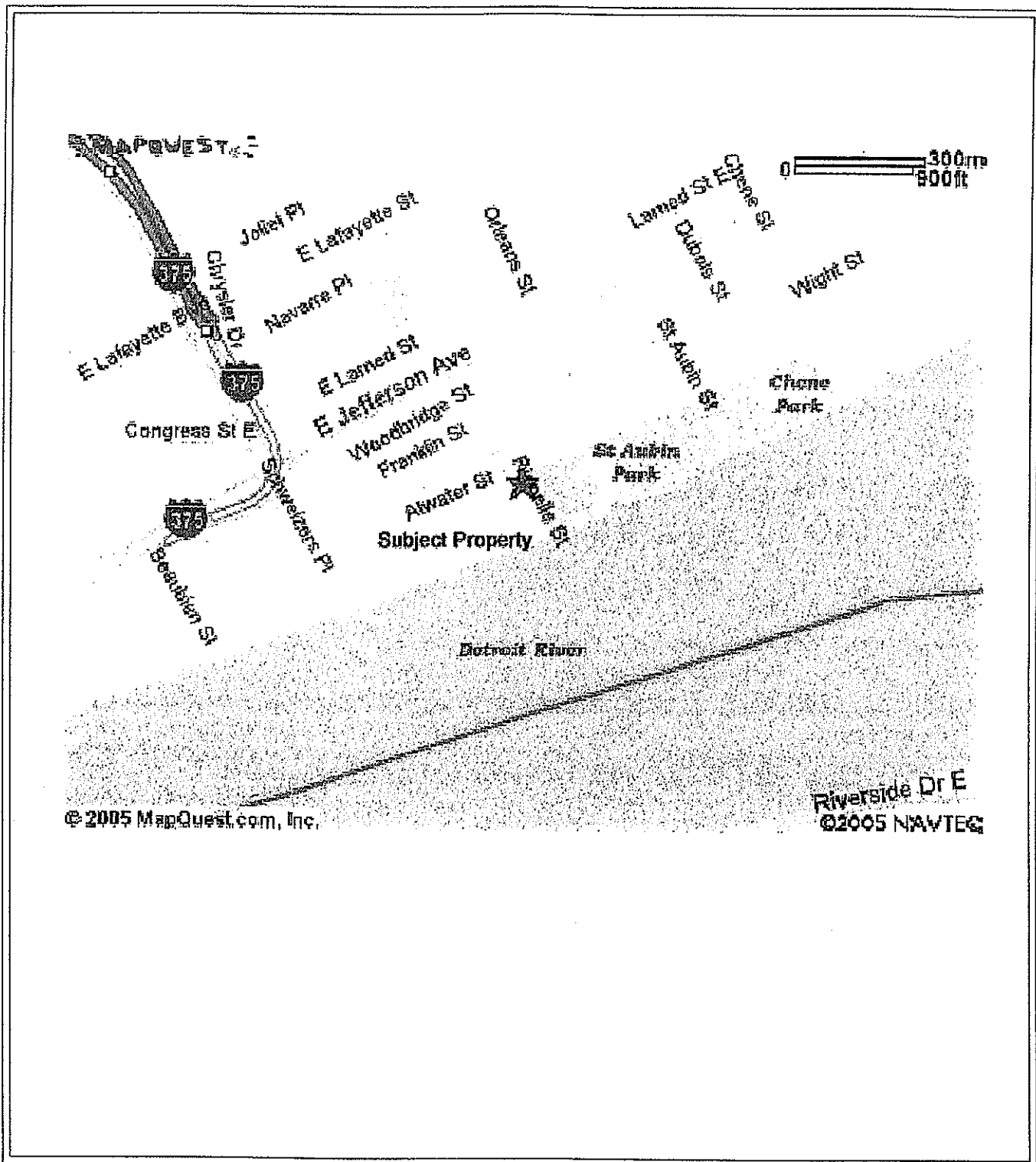
Enviro Matrix  
EM Job # 05-027

The City of Detroit.  
Baseline Environmental Assessment  
LaFarge Property  
June 30, 2005

7. EM, "Updated Phase II Environmental Site Assessment, LaFarge Property; 1470, 1500, and 1650 East Atwater Street," June 2005

## **9.0 ATTACHMENTS**

**Attachment A – Maps and Figures**  
**Attachment B – Legal Description**  
**Attachment C – Photographs**  
**Attachment D – Phase I ESA Reports**  
**Attachment E - Phase II ESA Report**  
**Attachment F – Updated Phase II ESA Report**



**FIGURE 1:  
SITE LOCATION MAP**

**LAFARGE PROPERTY  
DETROIT, MI**

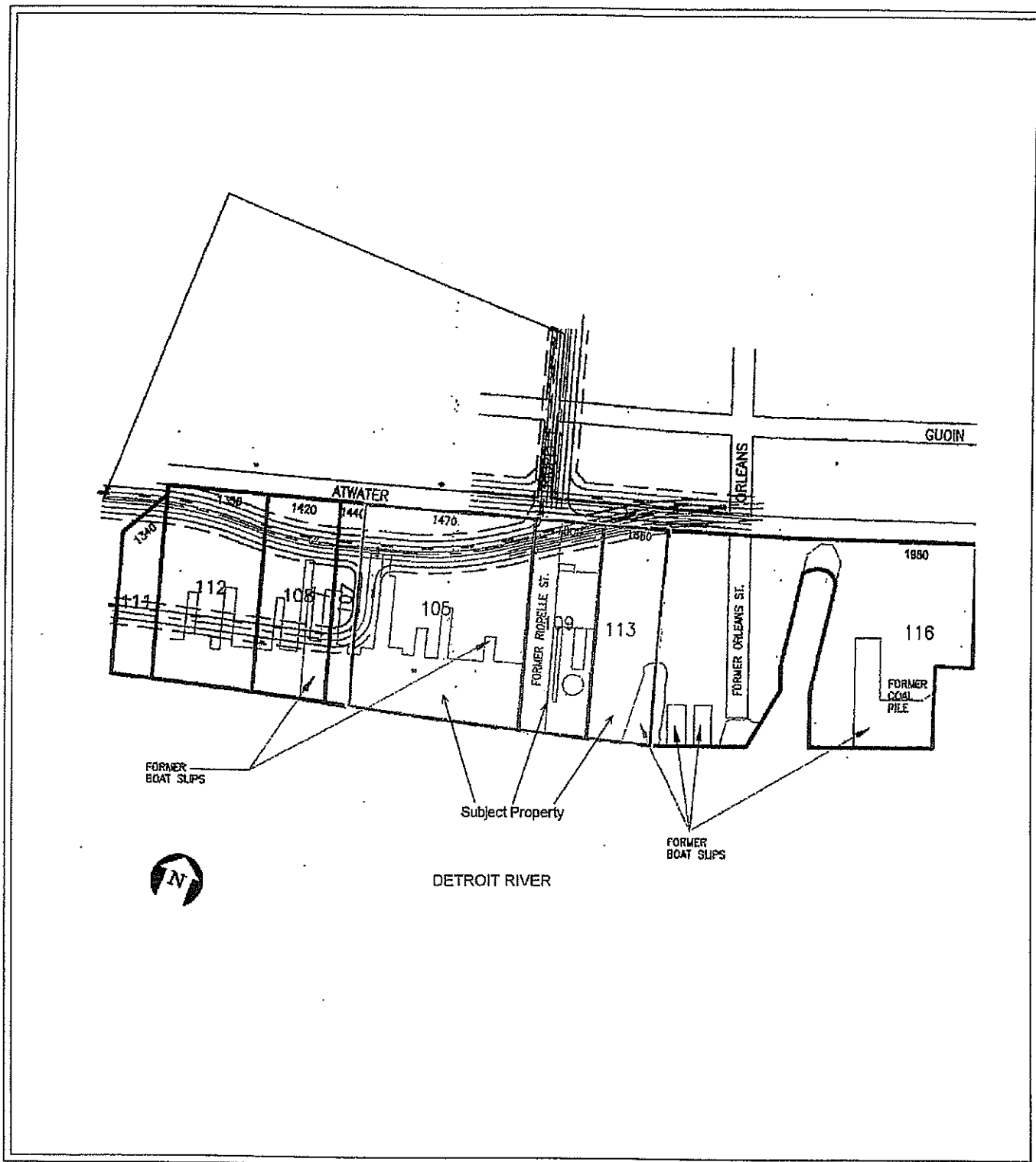
**MAPQUEST.COM**

**EM JOB NO:05-027**

**ENVIRO MATRIX, INC.  
ENGINEERING EXCELLENCE  
163 MADISON, SUITE 104  
DETROIT, MI 48226**

**JUNE 13, 2005**





**FIGURE 2:  
SITE FEATURES MAP**  
**LAFARGE PROPERTY  
DETROIT, MI**

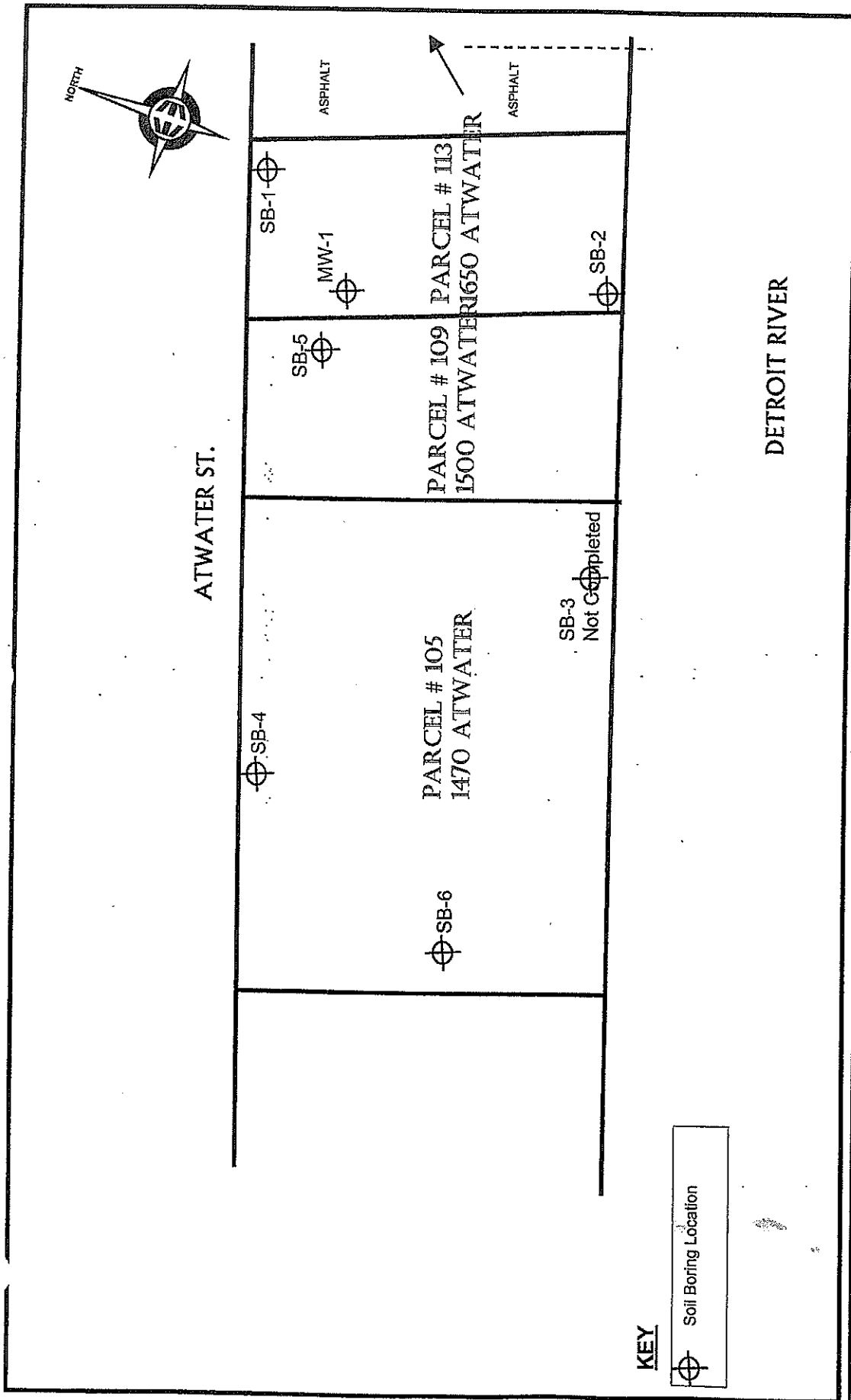
**MAPQUEST.COM**

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**ENGINEERING EXCELLENCE**  
**163 MADISON, SUITE 104**  
**DETROIT, MI 48226**

**JUNE 13, 2005**





**PHASE II ESA**  
LaFARGE Parcels  
Atwater, Michigan

ENVIRO MATRIX, INC.  
ENGINEERING EXCELLENCE  
163 MADISON, SUITE 104, DETROIT, MI 48226

EM JOB NO: 05-027

JUNE 2005



**APPENDIX B: TABLES R 299.5750 FOOTNOTES FOR  
GENERIC CLEANUP CRITERIA TABLES**



TABLE 1 : SOIL ANALYTICAL DATA - VOCs

| VOLATILES                  | Part 201 Generic Cleanup Criteria                                 |  |                        |   |      |     |      |     |      |     |
|----------------------------|---|--|------------------------|---|------|-----|------|-----|------|-----|
|                            | Residential & Commercial I  |  |                        |   |      |     |      |     |      |     |
|                            | Ambient Air<br>Finite Volatile<br>Soil Inhalation<br>for 2 Meters | Soil Volatilization<br>To Indoor Air<br>Inhalation | Soil Direct<br>Contact | Groundwater<br>Surface Water<br>Interface (GSI) | SB-1 |     | SB-2 |     | SB-4 |     |
| Sample ID                  |   |  |                        |   | Conc | MDL | Conc | MDL | Conc | MDL |
| Sample Depth (feet BGS)    |   |  |                        |   |      |     |      |     |      |     |
| Date Collected             |   |  |                        |   |      |     |      |     |      |     |
| Date Extracted             |   |  |                        |   |      |     |      |     |      |     |
| Date Analyzed              |   |  |                        |   |      |     |      |     |      |     |
| Analytical Method No.      |   |  |                        |   |      |     |      |     |      |     |
| Collection Method          |   |  |                        |   |      |     |      |     |      |     |
| CONSTITUENT (µg/kg)        |   |  |                        |   |      |     |      |     |      |     |
| Acetone                    | 1.90E+08  | 1.1E+8 (C)   | 2.30E+07               | 34,000  | ND   | 560 | ND   | 451 | ND   | 504 |
| Acrylonitrile              | 2.10E+06  | 4.80E+06   | 4.30E+06               | NA  | ND   | 560 | ND   | 451 | ND   | 504 |
| Benzene                    | 79,000  | 1,600  | 1.80E+05               | 4,000(X)  | ND   | 56  | ND   | 45  | ND   | 50  |
| Bromobenzene               | 4.50E+05  | 3.10E+05   | 5.40E+05               | NA  | ND   | 56  | ND   | 45  | ND   | 50  |
| Bromodichloromethane       | 19,000  | 1,200  | 1.10E+05               | ID  | ND   | 56  | ND   | 45  | ND   | 50  |
| Bromoform                  | 9.00E+05  | 1.50E+05   | 8.20E+05               | ID  | ND   | 56  | ND   | 45  | ND   | 50  |
| Bromomethane               | 1.40E+05  | 860  | 3.20E+05               | 700   | ND   | 56  | ND   | 45  | ND   | 50  |
| n-Butylbenzene             | ID  | ID   | 2.50E+06               | ID  | ND   | 56  | ND   | 45  | ND   | 50  |
| sec-Butylbenzene           | ID  | ID   | 2.50E+06               | ID  | ND   | 56  | ND   | 45  | ND   | 50  |
| tert-Butylbenzene          | ID  | ID   | 2.50E+06               | NA  | ND   | 56  | ND   | 45  | ND   | 50  |
| Carbon Disulfide           | 1.9E+7  | 76,000   | 2.8E+5 (C,DD)          | ID  | ND   | 560 | ND   | 451 | ND   | 504 |
| Carbon tetrachloride       | 28,000  | 190  | 96,000                 | 900(X)  | ND   | 56  | ND   | 45  | ND   | 50  |
| Chlorobenzene              | 2.10E+06  | 1.20E+05   | 2.6E+5 (C)             | 940   | ND   | 56  | ND   | 45  | ND   | 50  |
| Chloroethane               | 2.80E+08  | 9.5E+5 (C)   | 9.5E+5 (C)             | ID  | ND   | 56  | ND   | 45  | ND   | 50  |
| Chloroform                 | 270,000   | 7,200  | 1.20E+06               | 3,400(X)  | ND   | 56  | ND   | 45  | ND   | 50  |
| Chloromethane              | 1,000,000   | 2,300  | 1.1E+6 (C)             | ID  | ND   | 56  | ND   | 45  | ND   | 50  |
| Dibromochloromethane       | 33,000  | 3,900  | 1.10E+05               | ID  | ND   | 56  | ND   | 45  | ND   | 50  |
| Dibromomethane             | ID  | ID   | 2.0E+6 (C)             | NA  | ND   | 56  | ND   | 45  | ND   | 50  |
| 1,2-Dichlorobenzene        | 5.20E+07  | 2.1E+5 (C)   | 2.1E+5 (C)             | 360   | ND   | 56  | ND   | 45  | ND   | 50  |
| 1,3-Dichlorobenzene        | ID  | ID   | 1.7E+5 (C)             | 1,100   | ND   | 56  | ND   | 45  | ND   | 50  |
| 1,4-Dichlorobenzene        | 110,000   | 19,000   | 4.00E+05               | 290   | ND   | 56  | ND   | 45  | ND   | 50  |
| Dichlorodifluoromethane    | 1.40E+09  | 9.00E+05   | 1.0E+6 (C)             | ID  | ND   | 56  | ND   | 45  | ND   | 50  |
| 1,1-Dichloroethane         | 1.40E+07  | 2.30E+05   | 8.9E+5 (C)             | 15,000  | ND   | 56  | ND   | 45  | ND   | 50  |
| 1,2-Dichloroethane         | 26,000  | 2,100  | 91,000                 | 7200(X)   | ND   | 56  | ND   | 45  | ND   | 50  |
| 1,1-Dichloroethene         | 13,000  | 62   | 2.00E+05               | 1300(X)   | ND   | 56  | ND   | 45  | ND   | 50  |
| cis-1,2-Dichloroethylene   | 990,000   | 22,000   | 6.4E+5 (C)             | 12,000  | ND   | 56  | ND   | 45  | ND   | 50  |
| trans-1,2-Dichloroethylene | 2,000,000   | 23,000   | 1.4E+6 (C)             | 30,000  | ND   | 56  | ND   | 45  | ND   | 50  |

EDC LaF<sub>3</sub> parcels  
1470, 1500, 1.  
Detroit, MI

EDC LaF<sub>3</sub> parcels  
1470, 1500, 1.  
Detroit, MI

EDC LaF<sub>3</sub> parcels  
1470, 1500, 1.  
Detroit, MI

TABLE 2: SOIL ANALYTICAL DATA - PNAs AND METALS

| SEMI-VOLATILES             | Part 201 Generic Cleanup Criteria                   |  |                     |   |                   |                       |       |     |        |     |
|----------------------------|---|--|---------------------|---|-------------------|-----------------------|-------|-----|--------|-----|
|                            | Residential & Commercial I                          |  |                     |   |                   |                       |       |     |        |     |
|                            | Ambient Air Finite Volatile Inhalation for 2 Meters | Soil Volatilization To Indoor Air Inhalation | Soil Direct Contact | Groundwater Surface Water Interface (GSI) | SB-1              |                       | SB-2  |     | SB-4   |     |
| Sample ID                  | Sample Depth (feet BGS)                             | Date Collected                               | Date Extracted      | Date Analyzed                             | Collection Method | ANALYTICAL METHOD NO. | Conc  | MDL | Conc   | MDL |
| CONSTITUENT (µg/kg)        | 8.10E+07  | 1.90E+08                                     | 4.10E+07            | 4400                                      | ND                | 244                   | ND    | 244 | ND     | 244 |
| Acenaphthene               | 2.20E+06  | 1.60E+06                                     | 1.60E+06            | ID  | ND                | 244                   | ND    | 244 | ND     | 244 |
| Acenaphthylene             | 1.40E+09  | 1.0E+9 (D)                                   | 2.30E+08            | ID  | ND                | 244                   | ND    | 244 | ND     | 244 |
| Anthracene                 | NLV   | NLV  | 20,000              | NLL                                       | ND                | 244                   | ND    | 244 | ND     | 244 |
| Benzo(a)anthracene (Q)     | NLV   | NLV  | 2,000               | NLL                                       | 300               | 244                   | 640   | 244 | 1,700  | 253 |
| Benzo(a)pyrene (Q)         | ID  | ID   | 20,000              | NLL                                       | 270               | 244                   | 580   | 244 | 1,600  | 253 |
| Benzo(b)fluoranthene       | NLV   | NLV  | 2.50E+06            | NLL                                       | ND                | 244                   | 290   | 244 | 840    | 253 |
| Benzo(g,h,i)pyrene         | NLV   | NLV  | 2.00E+05            | NLL                                       | 280               | 244                   | 660   | 244 | 1,600  | 253 |
| Benzo(k)fluoranthene       | ID  | ID   | 2.00E+06            | NLL                                       | 330               | 244                   | 710   | 244 | 1,900  | 253 |
| Chrysene (Q)               | NLV   | NLV  | 2,000               | NLL                                       | ND                | 244                   | ND    | 244 | ND     | 253 |
| Dibenzo(a,h)anthracene (Q) | 7.40E+08  | 1.0E+9 (D)                                   | 4.60E+07            | 5,500                                     | 520               | 244                   | 1,700 | 244 | 4,700  | 253 |
| Fluoranthene               | 1.30E+08  | 5.80E+08                                     | 2.70E+07            | 5,300                                     | ND                | 244                   | ND    | 244 | 460    | 253 |
| Fluorene                   | NLV   | NLV  | 20,000              | NLL                                       | 240               | 244                   | 440   | 244 | 4,100  | 253 |
| Indeno(1,2,3-cd)pyrene (Q) | ID  | ID   | 8.10E+06            | ID  | ND                | 244                   | ND    | 244 | 270    | 253 |
| 2-Methylnaphthalene        | 3.00E+05  | 2.50E+05                                     | 1.60E+07            | 870                                       | ND                | 244                   | ND    | 244 | 1,200  | 253 |
| Naphthalene                | 1.60E+05  | 2.80E+06                                     | 1.60E+06            | 5,300                                     | 440               | 244                   | 1,100 | 244 | 1,500  | 253 |
| Phenanthrene               | 6.50E+08  | 1.0E+9 (D)                                   | 2.90E+07            | ID  | 510               | 244                   | 1,500 | 244 | 3,600  | 253 |
| Pyrene                     | ND: not detected (below the laboratory method det   |  |                     |   |                   |                       |       |     |        |     |
|                            |   |  |                     |   | Conc              | MDL                   | Conc  | MDL | Conc   | MDL |
|                            |   |  |                     |   | ND                | 244                   | ND    | 244 | 2,500  | 247 |
|                            |   |  |                     |   | ND                | 244                   | ND    | 244 | 280    | 247 |
|                            |   |  |                     |   | ND                | 244                   | ND    | 244 | ND     | 247 |
|                            |   |  |                     |   | ND                | 244                   | 680   | 244 | 11,000 | 247 |
|                            |   |  |                     |   | 300               | 244                   | 640   | 244 | 7,400  | 247 |
|                            |   |  |                     |   | 270               | 244                   | 580   | 244 | 7,500  | 247 |
|                            |   |  |                     |   | ND                | 244                   | 290   | 244 | 3,700  | 247 |
|                            |   |  |                     |   | 280               | 244                   | 660   | 244 | 6,100  | 247 |
|                            |   |  |                     |   | 330               | 244                   | 710   | 244 | 8,700  | 247 |
|                            |   |  |                     |   | ND                | 244                   | ND    | 244 | 790    | 247 |
|                            |   |  |                     |   | 520               | 244                   | 1,700 | 244 | 23,000 | 247 |
|                            |   |  |                     |   | ND                | 244                   | ND    | 244 | 3,700  | 247 |
|                            |   |  |                     |   | 240               | 244                   | 440   | 244 | ND     | 247 |
|                            |   |  |                     |   | ND                | 244                   | ND    | 244 | 1,200  | 247 |
|                            |   |  |                     |   | ND                | 244                   | ND    | 244 | 1,500  | 247 |
|                            |   |  |                     |   | 440               | 244                   | 1,100 | 244 | 18,000 | 247 |
|                            |   |  |                     |   | 510               | 244                   | 1,500 | 244 | 23,000 | 247 |



TABLE 1 : GROUNDWATER ANALYTICAL DATA - VOCs

| VOLATILES                  |                | Part 201 Generic Cleanup Criteria |  |   |                              |      |     |      |     |      |     |      |     |      |     |
|----------------------------|----------------|-----------------------------------|--|---|------------------------------|------|-----|------|-----|------|-----|------|-----|------|-----|
|                            |                | Residential & Commercial I        |  |   |                              |      |     |      |     |      |     |      |     |      |     |
| Sample ID                  |                | Drinking Water Criteria           | Groundwater Surface Water Interface Criteria | Groundwater Volatilization to Inhalation Criteria | Groundwater Contact Criteria | MW-1 |     | SB-2 |     | SB-4 |     | SB-5 |     | SB-6 |     |
| Date Collected             | Date Extracted | Date Analyzed                     | Analytical Method No.                        | Collection Method                                 | CONSTITUENT (µg/kg)          | Conc | MDL | Conc | MDL | Conc | MDL | Conc | MDL | Conc | MDL |
| Acetone                    |                | 730                               | 1,700  | 1.0E+9 (D,S)                                      | 3.10E+07                     | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| Acrylonitrile              |                | 140                               | NA   | 2.40E+07  | 5.60E+06                     | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| Benzene                    |                | 5.0 (A)                           | 200 (X)                                      | 5.60E+03  | 1.10E+04                     | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| Bromobenzene               |                | 18                                | NA   | 180,000   | 12,000                       | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| Bromodichloromethane       |                | 100 (A,W)                         | ID   | 4.80E+03  | 1.40E+04                     | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| Bromoform                  |                | 100 (A,W)                         | ID   | 470,000   | 140,000                      | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| Bromomethane               |                | 10                                | 35   | 4,000   | 7.00E+04                     | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| n-Butylbenzene             |                | 80                                | ID   | ID  | 5,900                        | 1.3  | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| sec-Butylbenzene           |                | 80                                | ID   | ID  | 4,400                        | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| tert-Butylbenzene          |                | 80                                | ID   | ID  | 8,900                        | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| Carbon Disulfide           |                | 800                               | ID   | 2.50E+05  | 1.2E+6 (S)                   | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| Carbon tetrachloride       |                | 5.0 (A)                           | 45 (X)                                       | 370   | 4,600                        | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| Chlorobenzene              |                | 100 (A)                           | 47   | 2.10E+05  | 86,000                       | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| Chloroethane               |                | 430                               | ID   | 5.7E+6 (S)  | 4.40E+05                     | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| Chloroform                 |                | 100 (A,W)                         | 170 (X)                                      | 28,000  | 1.50E+05                     | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| Chloromethane              |                | 260                               | ID   | 8,600   | 4.90E+05                     | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| Dibromochloromethane       |                | 100 (A,W)                         | ID   | 14,000  | 18,000                       | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| Dibromomethane             |                | 80                                | NA   | ID  | 5.30E+05                     | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| 1,2-Dichlorobenzene        |                | 600 (A)                           | 16   | 1.6E+5 (S)  | 1.6E+5 (S)                   | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| 1,3-Dichlorobenzene        |                | 6.6                               | 38   | ID  | 2,000                        | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| 1,4-Dichlorobenzene        |                | 75 (A)                            | 13   | 16,000  | 6,400                        | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| Dichlorodifluoromethane    |                | 1,700                             | ID   | 2.20E+05  | 3.0E+5 (S)                   | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| 1,1-Dichloroethane         |                | 880                               | 740  | 1.00E+06  | 2.40E+06                     | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| 1,2-Dichloroethane         |                | 5.0 (A)                           | 360 (X)                                      | 9,600   | 19,000                       | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| 1,1-Dichloroethene         |                | 7.0 (A)                           | 65 (X)                                       | 200   | 11,000                       | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| cis-1,2-Dichloroethylene   |                | 70 (A)                            | 620  | 93,000  | 2.00E+05                     | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |
| trans-1,2-Dichloroethylene |                | 100 (A)                           | 1,500  | 85,000  | 2.20E+05                     | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 | ND   | 1.0 |



TABLE 1 : GROUNDWATER ANALYTICAL DATA - VOCs

| VOLATILES                 |          | Part 201 Generic Cleanup Criteria |  |   |                              |          |          |          |          |          |          |          |          |          |          |
|---------------------------|----------|-----------------------------------|--|---|------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
|                           |          | Residential & Commercial I        |  |   |                              |          |          |          |          |          |          |          |          |          |          |
| Sample ID                 |          | Drinking Water Criteria           | Groundwater Surface Water Interface Criteria | Groundwater Volatilization to Inhalation Criteria | Groundwater Contact Criteria | MW-1     |          | SB-2     |          | SB-4     |          | SB-5     |          | SB-6     |          |
| Date Collected            |          |                                   |  |   |                              | 6/6/05   | 6/6/05   | 6/6/05   | 6/6/05   | 6/6/05   | 6/6/05   | 6/6/05   | 6/6/05   | 6/6/05   | 6/6/05   |
| Date Extracted            |          |                                   |  |   |                              | 6/13/05  | 6/13/05  | 6/13/05  | 6/13/05  | 6/13/05  | 6/13/05  | 6/13/05  | 6/13/05  | 6/13/05  | 6/13/05  |
| Date Analyzed             |          |                                   |  |   |                              | 6/13/05  | 6/13/05  | 6/13/05  | 6/13/05  | 6/13/05  | 6/13/05  | 6/13/05  | 6/13/05  | 6/13/05  | 6/13/05  |
| Analytical Method No.     |          |                                   |  |   |                              | EPA 8260 | EPA 8260 | EPA 8260 | EPA 8260 | EPA 8260 | EPA 8260 | EPA 8260 | EPA 8260 | EPA 8260 | EPA 8260 |
| Collection Method         |          |                                   |  |   |                              | GRAB     | GRAB     | GRAB     | GRAB     | GRAB     | GRAB     | GRAB     | GRAB     | GRAB     | GRAB     |
| CONSTITUENT (ug/kg)       |          |                                   |  |   |                              | Conc     | MDL      | Conc     | MDL      | Conc     | MDL      | Conc     | MDL      | Conc     | MDL      |
| 1,2-Dichloropropane       | 5.0 (A)  | 290 (X)                           | 16,000                                       | 16,000  | 16,000                       | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| 1,3-Dichloropropane       | 8.5      | NA                                | 3,900  | 3,900   | 5,500                        | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| Diethylether              | 10 (E,M) | ID                                | 6.1E+7 (S)                                   | 3.50E+07  | 3.50E+07                     | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| Ethylbenzene              | 74 (E)   | 18                                | 1.10E+05                                     | 1.7E+5 (S)  | 1.7E+5 (S)                   | 1.5      | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | 1.10     | 1.0      |
| Hexachloroethane          | 7.3      | 6.7 (X)                           | 27,000                                       | 1,900   | 1,900                        | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| 2-Hexanone                | 1,000    | NA                                | 4.20E+06                                     | 5.20E+06  | 5.20E+06                     | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| Isopropylbenzene          | 800      | ID                                | 56,000 (S)                                   | 56,000 (S)  | 56,000 (S)                   | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| 4-Methyl-2-pentanone      | 1,800    | ID                                | 2.0E+7 (S)                                   | 1.30E+07  | 1.30E+07                     | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| MTBE                      | 40 (E)   | 730 (X)                           | 4.7E+7 (S)                                   | 6.10E+05  | 6.10E+05                     | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| n-Propylbenzene           | 80       | ID                                | ID   | 15,000  | 15,000                       | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| Styrene                   | 100 (A)  | 80                                | 1.70E+05                                     | 9,700   | 9,700                        | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| 1,1,2,2-Tetrachloroethane | 8.5      | 78 (X)                            | 12,000                                       | 4,700   | 4,700                        | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| Tetrachloroethene         | 5.0 (A)  | 45 (X)                            | 25,000                                       | 12,000  | 12,000                       | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| Tetrahydrofuran           | 95       | 11,000 (X)                        | 6.90E+06                                     | 1.60E+06  | 1.60E+06                     | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| Toluene                   | 790 (E)  | 140                               | 5.3E+5 (S)                                   | 5.3E+5 (S)  | 5.3E+5 (S)                   | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| 1,2,4-Trichlorobenzene    | 70 (A)   | 30                                | 3.0E+5 (S)                                   | 19,000  | 19,000                       | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | 220      | 1.0      |
| 1,1,1-Trichloroethane     | 200 (A)  | 200                               | 6.60E+05                                     | 1.3E+6 (S)  | 1.3E+6 (S)                   | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| 1,1,2-Trichloroethane     | 5.0 (A)  | 330 (X)                           | 17,000                                       | 21,000  | 21,000                       | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| Trichloroethene           | 5.0 (A)  | 200 (X)                           | 15,000                                       | 22,000  | 22,000                       | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| Trichlorofluoromethane    | 2,600    | NA                                | 1.1E+6 (S)                                   | 1.1E+6 (S)  | 1.1E+6 (S)                   | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| 1,2,3-Trichloropropane    | 42       | NA                                | ID   | 84,000  | 84,000                       | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| 1,2,4-Trimethylbenzene    | 63 (E)   | 17                                | 56,000 (S)                                   | 56,000 (S)  | 56,000 (S)                   | 1.6      | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      |
| 1,3,5-Trimethylbenzene    | 72 (E)   | 45                                | 61,000 (S)                                   | 61,000 (S)  | 61,000 (S)                   | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | 1.9      | 1.0      |
| Vinyl chloride            | 2.0 (A)  | 15                                | 1,100  | 1,000   | 1,000                        | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | ND       | 1.0      | 1.0      | 1.0      |
| Total Xylenes             | 280 (E)  | 35                                | 1.9E+5 (S)                                   | 1.9E+5 (S)  | 1.9E+5 (S)                   | 3.3      | 3.0      | ND       | 3.0      | ND       | 3.0      | ND       | 3.0      | ND       | 3.0      |

ND: not detected {below the laboratory method detection limit (MDL)}

ND: not detected (below the laboratory method detection limit (MDL))



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TABLE 2: GROUNDWATER ANALYTICAL DATA - PNAs AND METALS

| SEMI-VOLATILES             | Part 201 Generic Cleanup Criteria |                                  |                                       |                              |  |             |      |      |      |      |
|----------------------------|-----------------------------------|----------------------------------|---------------------------------------|------------------------------|--|-------------|------|------|------|------|
|                            | Residential & Commercial I        |                                  |                                       |                              |  | Groundwater |      |      |      |      |
|                            | Drinking Water Criteria           | Surface Water Interface Criteria | Volatilization to Inhalation Criteria | Groundwater Contact Criteria |  | MW-1        | SB-2 | SB-4 | SB-5 | SB-6 |
| Sample ID                  |                                   |                                  |                                       |                              |  | Conc        | MDL  | Conc | MDL  | Conc |
| Date Collected             | 1,300                             | 19                               | 4,200 (S)                             | 4,200 (S)                    |  | ND          | 1.0  | ND   | 1.0  | ND   |
| Date Extracted             | 52                                | ID                               | 3,900 (S)                             | 3,900 (S)                    |  | ND          | 1.0  | ND   | 1.0  | ND   |
| Date Analyzed              | 43 (S)                            | ID                               | 43 (S)                                | 43 (S)                       |  | ND          | 1.0  | ND   | 1.0  | ND   |
| Analytical Method No.      | 2.1                               | ID                               | NLV                                   | 9.4 (S,AA)                   |  | ND          | 1.0  | ND   | 1.0  | ND   |
| Collection Method          | 2.0 (M)                           | ID                               | NLV                                   | 2.0 (M,AA)                   |  | ND          | 1.0  | ND   | 1.0  | ND   |
| CONSTITUENT (µg/kg)        | 5.0 (M)                           | NA                               | NLV                                   | 5.0 (M,AA)                   |  | ND          | 1.0  | ND   | 1.0  | ND   |
| Acenaphthene               | 5.0 (M)                           | NA                               | NLV                                   | 5.0 (M,AA)                   |  | ND          | 1.0  | ND   | 1.0  | ND   |
| Acenaphthylene             | 5.0 (A)                           | ID                               | NLV                                   | 2.0 (M,AA)                   |  | ND          | 1.0  | ND   | 1.0  | ND   |
| Anthracene                 | 5.0 (M)                           | ID                               | NLV                                   | 5.0 (M,AA)                   |  | ND          | 1.0  | ND   | 1.0  | ND   |
| Benzo(a)anthracene (Q)     | 2.0 (M)                           | ID                               | NLV                                   | 2.0 (M,AA)                   |  | ND          | 1.0  | ND   | 1.0  | ND   |
| Benzo(a)pyrene (Q)         | 210 (S)                           | 5.0 (M)                          | 210 (S)                               | 210 (S)                      |  | ND          | 1.0  | ND   | 1.0  | ND   |
| Benzo(b)fluoranthene       | 880                               | ID                               | 2,000 (S)                             | 2,000 (S)                    |  | ND          | 1.0  | ND   | 1.0  | ND   |
| Benzo(g,h,i)pyrene         | 2.0 (M)                           | ID                               | NLV                                   | 2.0 (AA,M)                   |  | ND          | 1.0  | ND   | 1.0  | ND   |
| Benzo(k)fluoranthene       | 260                               | ID                               | ID                                    | 25,000 (S)                   |  | ND          | 1.0  | ND   | 1.0  | ND   |
| Chrysene (Q)               | 520                               | 13                               | 31,000 (S)                            | 31,000 (S)                   |  | ND          | 1.0  | ND   | 1.0  | ND   |
| Dibenz(a,h)anthracene (Q)  | 52                                | 5.0 (M)                          | 1,000 (S)                             | 1,000 (S)                    |  | ND          | 1.0  | ND   | 1.0  | ND   |
| Fluorene                   | 140 (S)                           | ID                               | 140 (S)                               | 140 (S)                      |  | ND          | 1.0  | ND   | 1.0  | ND   |
| Indeno(1,2,3-cd)pyrene (Q) |                                   |                                  |                                       |                              |  |             |      |      |      |      |
| 2-Methylnaphthalene        |                                   |                                  |                                       |                              |  |             |      |      |      |      |
| Naphthalene                |                                   |                                  |                                       |                              |  |             |      |      |      |      |
| Phenanthrene               |                                   |                                  |                                       |                              |  |             |      |      |      |      |
| Pyrene                     |                                   |                                  |                                       |                              |  |             |      |      |      |      |

ND: not detected (below the laboratory method detection limit)



TABLE 2: GROUNDWATER ANALYTICAL DATA - PNAs AND METALS

| METALS                |                    | Part 201 Generic Cleanup Criteria |                                       |             |                              |      |      |      |      |      |      |      |      |       |      |
|-----------------------|--------------------|-----------------------------------|---------------------------------------|-------------|------------------------------|------|------|------|------|------|------|------|------|-------|------|
| Sample ID             |                    | Residential & Commercial I        |                                       |             |                              |      |      |      |      |      |      |      |      |       |      |
| Date Collected        |                    | Drinking Water Criteria           | Groundwater                           | Groundwater | Groundwater Contact Criteria | MW-1 |      | SB-2 |      | SB-4 |      | SB-5 |      | SB-6  |      |
| Date Extracted        | Surface Water      |                                   | Volatilization to Inhalation Criteria | Conc        |                              | MDL  | Conc | MDL  | Conc | MDL  | Conc | MDL  |      |       |      |
| Date Analyzed         | Interface Criteria |                                   |                                       |             |                              |      |      |      |      |      |      |      |      |       |      |
| Analytical Method No. |                    |                                   |                                       |             |                              |      |      |      |      |      |      |      |      |       |      |
| Collection Method     |                    |                                   |                                       |             |                              |      |      |      |      |      |      |      |      |       |      |
| CONSTITUENT (µg/kg)   |                    |                                   |                                       |             |                              | Conc | MDL  | Conc | MDL  | Conc | MDL  | Conc | MDL  | Conc  | MDL  |
| Arsenic               | 50 (A)             | 150 (X)                           | NLV                                   | 4,300       | 17                           | 2.1  | 5.7  | 2.1  | 2.1  | ND   | 2.1  | 9.4  | 2.1  | 62    | 2.1  |
| Barium                | 2,000 (A)          | (G,X)                             | NLV                                   | 1,40E+07    | 180                          | 1.5  | 160  | 1.5  | 1.5  | 150  | 1.5  | 290  | 1.5  | 950   | 1.5  |
| Cadmium               | 5.0 (A)            | (G,X)                             | NLV                                   | 1,90E+05    | 1.8                          | 0.9  | ND   | 0.9  | 0.9  | ND   | 0.9  | ND   | 0.9  | ND    | 0.9  |
| Chromium              | 100 (A)            | 11                                | NLV                                   | 4,60E+05    | 11                           | 1.5  | 4.1  | 1.5  | 1.5  | 7.0  | 1.5  | 27   | 1.5  | 35    | 1.5  |
| Copper                | 1,000 (E)          | (G)                               | NLV                                   | 7,40E+06    | 8.3                          | 1.5  | 170  | 1.5  | 1.5  | 9.5  | 1.5  | 170  | 1.5  | 510   | 1.5  |
| Lead                  | 4.0 (L)            | (G,X)                             | NLV                                   | ID          | 1                            | 0.16 | 0.8  | 0.16 | 0.16 | 0.84 | 0.16 | 4.2  | 0.16 | 6.2   | 0.16 |
| Mercury               | 2.0 (A)            | 0.0013                            | 56 (S)                                | 56 (S)      | 16                           | 1.6  | 160  | 1.6  | 1.6  | 37   | 1.6  | 310  | 1.6  | 1,100 | 1.6  |
| Selenium              | 50 (A)             | 5                                 | NLV                                   | 9,70E+05    | ND                           | 2.7  | ND   | 2.7  | 2.7  | ND   | 2.7  | ND   | 2.7  | ND    | 2.7  |
| Silver                | 34                 | 0.2 (M)                           | NLV                                   | 1,50E+06    | ND                           | 0.15 | 0.97 | 0.14 | 0.14 | 0.58 | 0.14 | ND   | 0.14 | ND    | 0.14 |
| Zinc                  | 2,400              | (G)                               | NLV                                   | 1,10E+08    | 88                           | 1.5  | 200  | 1.5  | 1.5  | 75   | 95   | 280  | 95   | 670   | 95   |